

Journal
of the Fisheries
Research
Board
of Canada

Journal
de l'office
des recherches
sur les pêcheries
du Canada

Volume 32, Index 1975



Environment
Canada

Fisheries and
Marine Service

Environnement
Canada

Service des pêches
et des sciences de la mer

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Environnement Canada

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Fisheries
and Marine Service

Service des pêches
et des sciences de la mer

Office of the Editor

Bureau du Rédacteur

116 Lisgar, Ottawa K1A 0H3

Volume 32, Index 1975

The *Journal of the Fisheries Research Board of Canada* has been published continuously since 1901, previously as *Contributions to Canadian Biology* 1901-25, *Contributions to Canadian Biology and Fisheries* 1926-34, and *Journal of the Biological Board of Canada*, 1934-37.

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Journal of the Fisheries Research Board of Canada

Journal de l'office des recherches sur les pêcheries du Canada

Volume 32, Index 1975

INDEX TO PUBLICATIONS FOR 1975¹

In 1968 the Fisheries Research Board of Canada published Bulletin 164, containing a list of all articles, in all series, of publications and Studies that appeared to the end of 1964, together with a subject-author index to all series. In 1973 the Fisheries Research Board of Canada published Miscellaneous Special Publication 18, also containing a list of all articles, in all series, of publications and Studies that appeared from January 1965 to December 1972. From 1965 on, a subject-author index and list of all publications (including Studies, Interpretive Articles, and Miscellaneous Special Publications) were included in the last issue of each Journal volume. Starting with the December 1973 issue of the Journal, the inclusion of the subject-author index and list of publications in the December issue was discontinued. They are now issued in separate form, as an appendix to the December issue. These follow the pattern and style used in Bulletin 164.

The present subject-author index is based on: (a) the 12 issues of Volume 32 of the Journal²; (b) Bulletins 186F, 187F, 188F, 189F, 190, 191, 192, and 193 issued during 1975 and Bulletins 167, 178, 180, 184, and 184F reprinted in 1975; (c) Circulars and Technical Reports from the Service's establishments issued during 1975 in time to be included; (d) Miscellaneous Special Publications (include special bindings and pamphlets that do not belong to a particular series of Service publications) No. 26 and 27, and the reprint of MSP 22; (e) Studies No. 2006-2089 reprints of articles published in other periodicals (annual two-part bindings ceased with the 1969, Part 2 issue); (f) general reference to the 1974 Annual Report and Retrospective 1971-1972; (g) Interpretive Articles 320-328 that appeared in non-Service publications.

INDEX DES PUBLICATIONS POUR 1975¹

En 1968, l'Office des recherches sur les pêcheries du Canada a publié le Bulletin 164, comprenant une liste de tous les articles, dans toutes les séries, de publications et des Studies parus jusqu'à la fin de 1964, ainsi qu'un index matière-auteur de toutes les séries. En 1973, il a publié la Miscellaneous Special Publication 18, qui contient aussi une liste de tous les articles, dans toutes les séries, des publications et des Studies parus à partir de janvier 1965, jusqu'à décembre 1972. À partir de 1965, on a inclus dans le dernier numéro de chaque volume du Journal, un index matière-auteur et une liste de toutes les publications (y compris les Etudes, les Articles explicatifs et les Publications diverses spéciales). En commençant par le numéro de décembre 1973 du Journal, l'inclusion de l'index-matière et de la liste des publications dans le numéro de décembre a été discontinuée. Ils sont maintenant publiés séparément, comme appendice du numéro de décembre. Ces index ont conservé la forme utilisée dans le Bulletin 164.

Le présent index matière-auteur se base sur (a) les 12 numéros du volume 32 du Journal²; (b) les Bulletins 186F, 187F, 188F, 190, 191, 192 et 193 parus en 1975, et Bulletins 167, 178, 180, 184 et 184F réimprimés en 1975; (c) les Circulaires et les Rapports techniques des établissements du Service, parus en 1975, assez tôt pour y être inclus; (d) les Publications diverses spéciales (y compris les ouvrages spéciaux reliés et les brochures qui n'appartiennent à aucune série particulière des publications du Service) n° 26 et 27; (e) les Etudes n° 2006-2089, réimpression d'articles publiés dans d'autres périodiques (les ouvrages annuels reliés en deux parties ont été discontinués avec la parution de la partie 2, en 1969); (f) des références générales au Rapport annuel de 1974 et Retrospective 1971-1972; (g) les Articles explicatifs 320-328 qui ont parus dans des publications hors du Service.

¹ Index prepared by Neal M. Carter.

² Issues 11 and 12 were indexed from abstracts only.

Printed in Canada

¹ Index préparé par Neal M. Carter.

² On n'a employé que les résumés pour classer les numéros 11 et 12.

Imprimé au Canada

ABBREVIATIONS USED IN THE INDEX

(The designation (F) in the index indicates the article referred to was published in French, and (R) indicates the article was reprinted in 1975)

- J** – Journal of the Fisheries Research Board of Canada
- B** – Bulletin
- AR** – Annual Report of the Fisheries Research Board of Canada
- CHN** – Circular of Halifax Laboratory
- CNG** – Circular of Biological Station, Nanaimo, B.C. (general series)
- T** – Technical Report
- MSP** – Miscellaneous Special Publication
- S** – Studies
- A** – Interpretive Article

The Provinces and Territories of Canada are abbreviated to:

- | | |
|-------------------------|--------------------------------|
| Alta. (Alberta) | N.W.T. (Northwest Territories) |
| B.C. (British Columbia) | Ont. (Ontario) |
| Man. (Manitoba) | P.E.I. (Prince Edward Island) |
| N.B. (New Brunswick) | Que. (Quebec) |
| Nfld. (Newfoundland) | Sask. (Saskatchewan) |
| N.S. (Nova Scotia) | Yuk. (Yukon Territory) |

Certain geographical areas (particularly oceans) have their major subdivisions designated by N(north), S(south), E(east), W(west), NW(northwest), etc., also Atl. (Atlantic), Pac. (Pacific).

Certain international commissions are commonly referred to as: ICNAF (International Commission for the Northwest Atlantic Fisheries); INPFC (International North Pacific Fisheries Commission).

In the index references, "re" is frequently used to imply "in relation to," "in connection with," and similar meanings; "vs." to imply such meanings as "in contrast to," "as opposed to."

Scientific names, common names, and their spellings, for Canadian and American marine fishes taken within 200-m depth and for freshwater fishes are indexed according to the nomenclature recommended in *A List of Common and Scientific Names of Fishes from the United States and Canada* (Third Edition, 1970), Special Publication No. 6 of the American Fisheries Society. Where authors have used names or spellings not conforming to those recommended, index headings for such names are included, referring to the recommended ones under which the subject entries will be found.

ABRÉVIATIONS EN USAGE DANS L'INDEX

(La désignation (F) dans l'index signifie que l'article dont il est question a été publié en français et la désignation (R) signifie que l'article a été réimprimé.

- J** – Journal de l'Office des recherches sur les pêcheries du Canada
- B** – Bulletin
- AR** – Rapport annuel de l'Office des recherches sur les pêcheries du Canada
- CHN** – Circulaire du laboratoire à Halifax.
- CNG** – Circulaire de la station de biologie à Nanaïmo (C.-B.) (séries générales)
- T** – Rapports techniques
- MSP** – Publications diverses spéciales
- S** – Etudes
- A** – Articles explicatifs

Les provinces et territoires du Canada sont abrégés comme il suit:

- | | |
|-----------------------------|------------------------------------|
| Alta. (Alberta) | N.W.T. (Territoires du Nord-Ouest) |
| B.C. (Colombie-Britannique) | Ont. (Ontario) |
| Man. (Manitoba) | P.E.I. (Île-du-Prince-Édouard) |
| N.B. (Nouveau-Brunswick) | Que. (Québec) |
| Nfld. (Terre-Neuve) | Sask. (Saskatchewan) |
| N.S. (Nouvelle-Écosse) | Yuk. (Territoire du Yukon) |

Certaines régions géographiques (surtout les océans) ont leur principales subdivisions indiquées de la façon suivante: N(nord), S(sud), E(est), W(ouest), NW(nord-ouest) ainsi que Atl. (Atlantique), Pac. (Pacifique).

On désigne communément certaines commissions internationales de la façon suivante: ICNAF (Commission internationale des pêcheries de l'Atlantique nord-ouest); INPFC (Commission internationale des pêcheries du Pacifique nord).

Dans le cas des références de l'index, on se sert souvent de *re* pour signifier *en relation avec* et autres expressions semblables: *vs* signifie *par opposition à*.

Les désignations scientifiques, les noms communs, et l'orthographe des poissons marins canadiens et américains, pris en-deçà de 200 m de profondeur, ainsi que des poissons d'eau douce sont indexés conformément aux recommandations de l'ouvrage *A List of Common and Scientific Names of Fishes from the United States and Canada* (troisième éditions, 1970), Publication diverse spéciale n° 6 de l'American Fisheries Society quand un auteur utilise des désignations différentes des formes recommandées, on inclut des rubriques renvoyant à ces dernières, sous lesquelles on trouve les notices.

KEY TO ESTABLISHMENTS

The number in front of each address corresponds to the number shown at the end of titles in some of the listed series of publications to indicate from which establishment the publication or report originated, or may be obtained.

- (1) Department of the Environment
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- J 32(8): 1283 (*Aphanizomenon flos-aquae* re fish summerkill in SW Man. prairie ponds)
(8): 1500 (review of book on algal physiology & biochemistry)
T 557 (species list of aquatic, from waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
558 (attached algal growth in Carnation Creek, Vancouver Is., an as yet unlogged coastal rain forest stream)

Alginate

- S 2045 (hydrolysis by bacteria associated with seaweeds)

Alleles (see Genetics)

Allen, John L.

- J 32(10): 1873 (coho salmon renal excretion after acute exposure to TFM lampricide)

Alligatorfish (*Aspidophoroides monopterygius*)

- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)

Allometry

- J 32(1): 88 (re hybridization in *Lepomis* sunfishes)

Alloxanthin (see Pigments)

Alona; *Alonella* (see Cladocera)*Alopex lagopus* (see Fox, Arctic)*Alosa pseudoharengus* (see Alewife)*sapidissima* (see Shad, American)

Aluminum derivatives

- J 32(9): 1643 (in lumpfish & menhaden meals)
T 488 (literature review of mine effluents effects on aquatic ecosystems)
509 (variation of amount in B.C. kelp during growing season)
556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
A 324 (environmental pollutive potential & toxicity re biological uptake (review))

Amines (see Ammonia; Trimethylamine)

Ammodytes americanus (see Lance, American sand)

Ammonia; Ammonia nitrogen; Ammonium ion (see also Nutrients, aquatic)

- J 32(11): 2189 (excretion by marine zooplankton re phytoplankton concentration)
(12): 2379 (pH & temperature effect on aqueous NH_3 equilibrium, re toxicity to fish)
(12): 2479 (daily pattern of nitrogen excretion (as NH_3 & urea) by young sockeye salmon under controlled conditions)
T 535 (removal in hatchery & aquaculture water reuse systems by the zeolite-clinoptilolite)
S 2019 (release from sediments in eutrophic lakes)

Amphiodia (see Brittle star)

Amphipoda

- J 32(2): 243 (metabolism of *Anisogammarus pugettensis* re its trophic position in feed web of young salmonids)
(2): 326 (shallow-water gammaridean, of New England (book review))
(8): 1442 (distribution of 19 species of Hyperiidea off Oregon coast, with further data on the 7 commonest; also new range records for *Lanceola loveni* & *Scina crassicornis bermudensis*)
(8): 1455 (toxicity of a larval lampricide to *Gammarus pseudolimnaeus*)
(12): 2564 (response of *G. zaddachi* & *Boeckosimus affinis* to temperature & salinity variations)
T 519 (laboratory key for identification of B.C. *Corophidium* species)
547; 557 (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
572 (*Pontoporeia affinis* predominant in L. Superior macroinvertebrate benthos)

Anacystis (see Cyanophyta)

Analysis, chemical (see Analysis methods (chemical); Apparatus; Bioassay; Composition, chemical; Limnology; Nutrients, aquatic; Oceanography; etc.; also types of chemicals (e.g. Acids; names of chemical elements and entities))

Analysis, mathematical (see Computer programming; Mathematical treatment of data; Models)

Analysis, proximate (see Analysis methods (chemical); Composition, chemical)

Analysis, spectral

T 539 (mathematics of theory & techniques)

Analysis methods (chemical) (see also Apparatus; Bioassay; Chromatography; Composition, chemical; Enzymes; Limnology; Pollution; Toxicants, etc.; also chemical entities, e.g. names of chemical elements)

J 32(2): 249 (selenium determination in fish tissues)
(2): 292 (for traces of phenols in waters)
(2): 316 (for differentiation between natural & fuel oil hydrocarbon contamination in cooked lobster meat)
(4): 457 (of tri-aryl phosphate ester lubricant (Imol S-140) in fish tissue & water)
(6): 813 (simplified spectrophotometric curcumin method for boron in marine shellfish)

CHN 51 (improved TBA test for food rancidity)
52 (rancidity index)

T 481 (fluorescence spectroscopic, for petroleum hydrocarbons in sea water)

491 (chlorinated paraffins)

498 (for metal elements in feathers, by atomic absorption-flame emission spectroscopy, & computer program for)

545 (centrifugation vs. filtration for determining low sediment concentrations in waters)

555 (flameless atomic absorption, vs. chemical & physical, for trace metal in fresh water)

561 (halides in B.C. kelp)

S 2006 (headspace volatiles in canned fish)

2010 (microbial oxidation of methane in lake water)

2015 (chlorine in organic materials by combustion & microcoulometry)

2020 (microdetermination of Hg & organomercury in environmental materials)

2021 (automated, for chloride & SO₄ in fresh water by cation exchange & electrical conductance)

2025 (GLC of fenitrothion in fish, water, & sediment)

2027 (chromatographic, for isolation of miserotoxin & detection of aliphatic nitro compounds)

2029 (arsenic in marine organisms)

2038 (pentachlorophenol & chlorobiphenyls in biological samples)

2047 (GLC for thionocarbamate-type flotation agent in mine wastes)

2065 (petroleum hydrocarbons in sea water by fluorescent spectroscopy, etc.)

Analysis methods (mathematical) (see also Computer programming; Mathematical treatment of data; Models)

T 539 (summary of theory & techniques of power spectral analysis)

Anatomy

J 32(7): 1019 (of stranded northern bottlenose whales, Bay of Fundy, N.S.)

MSP 27 (practical guide to, & physiology, of Pac. salmon)

Ancistrosyllis (see Polychaeta)

Anderson, Lee Grant

J 32(10): 1825 (analysis of exploitation & maximum economic yield in biologically & technologically interdependent fisheries)

Anesthesia; Anesthetics; Anesthetization

J 32(2): 300 (experimental galvanonarcosis for rainbow trout immobilization)

(5): 661 (M.S. 222 effect on rainbow trout learning a simple conditioned response)

Angell, Charles L.

J 32(10): 1723 (epizootiology of tumors in a population of young English sole, Puget Sound, Wash.)

Angling (see also Baits)

J 32(12): 2365 (estimating survival rate of fish from tags returned by anglers)

(12): 2520 (statistical bias problem in on-site surveys of catch & effort estimates)

CHN 99 (biology aspects of steelhead trout, & fishery from 3 years of anglers' catches, Nanaimo R., B.C.)

T 567 (feed, size, ecology, etc., of cutthroat trout, Great Central L., Vancouver Is., B.C.)

Anguilla rostrata (see Eel, American)

Animal feed (see Diet; Feed; Feedstuff; Meals)

Anisakis (see Nematoda)

Anisogammarus (see Amphipoda)

Annelida (see Oligochaeta; Polychaeta)

Anodonata (see Clams, freshwater)

Anoplarchus (see Cockscorb)

Anoplopoma fimbria (see Sablefish)

Antarctic

J 32(7): 952 (catches of smaller cetaceans)

(7): 995 (biological parameters of minke whale)

Antennules

S 2012 (role of, & effect of ablation on, olfactory perception in American lobster)

- Antia, Naval Jamshedji
 J 32(8): 1500 (review of book on algal physiology & biochemistry)
 (12): 2487 (effects from borate pollution on marine phytoplankters growth)
 S 2067 (cis-trans isomerism of alloxanthin & isolation of an unusually stable cis-isomer from a marine cryptomonad algal culture)
 2068 (wax ester production from same culture as above)
 2087 (L-threonine deaminase feedback effects in a marine diatom & a cryptomonad)
- Antibiotics
 J 32(4): 554 (acute toxicity of kanamycin to steelhead trout)
- Antibody
 J 32(11): 2224 (fluorescent technique for detecting infection of bacterial kidney disease in salmonids)
- Antimicrobial agents (see also Antibiotics; Disinfectants)
 J 32(1): 69 (Furanace effects on mummichog larvae)
 (11): 2033 (dyes, formalin, CuSO₄, KMnO₄, & NaCl effects on nitrification in an aqueous recirculating system)
- Antimony derivatives
 A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Antimycin
 J 32(6): 769 (pH effects on toxicity to fish; also on detoxification of)
- Antioxidants
 J 32(2): 227 (re oxidative deterioration of canned lake whitefish)
- Aphanizomenon flos-aquae* (see Cyanophyta)
- Apparatus; Equipment (when shown in illustrations; utilizations are also indexed under appropriate headings. In addition to the following, see Gear, fishery; Marking; Tagging)
 J 32(2): 219 (measuring filtering rates of *Daphnia*)
 (2): 314 (automatic brine shrimp feeder for aquatic bioassays)
 (2): 321 (photographic estimation of dry, live weight of unanesthetized fish)
 (3): 416 (perfusion fixation of whole fish for electron microscopy)
 (4): 544 (multichannel toxicant injection system for flow-through bioassays)
 (5): 633 (observation of fish spawning behavior in laboratory flumes)
 (5): 661 (for learning of conditioned responses by rainbow trout)
 (5): 681 (for preferences of young Pac. salmon & trout re simulated alteration of winter habitat)
 (6): 729 (determination of relative attractiveness of various baits & chemical compounds to some marine fish in their natural habitat)
 (7): 955, 1163, 1191, 1197, 1229 (re capture of smaller cetaceans by nets or harpoon)
 (7): 961 ("streamer" tag for small cetaceans)
 (9): 1533 (periscopic photographic, for 3-dimensional positions of fish in schools)
 (10): 1849 (for continuously saturating water with hydrophobic organic chemicals)
 (10): 1860 (for measuring dorsal light response re preference of fish for planktonic prey length)
 (10): 1880 (improved, for crab larvae culture in flowing water)
 (10): 1884 (for quantitative determination of locomotor activity of aquatic organisms)
 (12): 2515 (modified lobster trap for catching crabs)
 (12): 2535 (small-boat otter trawl for limnological studies)
 T 481 ("slurp bottle" for sampling surface waters, particularly surface films; also weighted bottle for near-surface sampling)
 484 (color sorter for raw & canned Pac. salmon flesh)
 486 (for introduction of toxicant into fish tank for bioassays)
 494 (solid-state temperature controller with heating & cooling control)
 499 (for automatic monitoring & recording of passage of ultrasonically tagged fish through channels)
 500 (cages for observing growth, etc., of Atl. blue mussel)
 502 (for behavioral responses of whitefish & rainbow trout to drilling fluids)
 517 (electronic systems for continual monitoring of temperature, pH, conductivity, & dissolved oxygen)
 538; 541; 543 (floating fish pens for salmonid aquaculture)
 544 (raft for 5 mariculture nets)
 560 (for sampling water & measuring light penetration under ice & snow cover of lakes)
 568 (carbonate determination in kelp)
 S 2006 (collecting & concentrating headspace volatiles (e.g. from canned foods) for gas chromatography)
 2010 (measuring microbial oxidation of methane in lake water samples)
 2015 (determining organochlorine in liquid & solid materials)
 2021 (automated determination of chloride & sulfate in fresh water by cation exchange & conductance)
 2034 (hydrophone for determining swimming depth of ultrasonic transmitter-fitted fish)
 2041 (ultrasonic pulse backscatter determination of fish muscle lipid content)
 A 323 (inshore lobster trap & boat)
 326 (computerized echo-counting system for demersal fishes)

- Aquaculture (see also Culture; Diet; Feed; Hatchery; Nutrients, aquatic; Pen, fish; Propagation)
J 32(2): 243 (possible use of *Anisogammarus pugetensis* amphipod in, for young salmon)
(2): 314 (automatic brine shrimp feeder for)
(8): 1431 (importance of cholesterol in diet for young American lobster)
(8): 1465 (as investigated by FRBC (summary))
B 188(F) (practice & promise, in Canada (French edition of 1974 English edition))
T 510; 511; 512 (re suitability of SW Man. prairie pothole lakes for rainbow trout)
535 (ammonia removal from reuse water systems by the zeolite clinoptilolite)
538 (effects of several experimental diets on rainbow trout in moored fish pens in salt water)
541; 543 (Pac. salmon in experimental floating sea pens)
544 (raft for 5 mariculture nets)
S 2033 (chopped Atl. herring as dietary component for Atl. salmon)
A 324 (effects of water pollution by metal derivatives)
- Aquaria; Oceanaria (see also Aquaculture; Tanks)
J 32(7): 891-952 (adaptability of various smaller cetaceans to public display or scientific live experiments, by species)
(7): 1191, 1197, 1213 (techniques for live capture of smaller cetaceans for public display in)
- Arai, Hisao Philip
S 2059 (revision of *Helicometra* & related trematode genera, with description of new species, *Neohelicometra sebastis*)
- Archibald, Chris Patrick
J 32(9): 1589 (effects of goldfish predation on zooplankton of a small saline lake)
- Arctic (see also Beaufort Sea; Great Bear Lake; Mackenzie River; Northwest Territories; Porcupine River; Yukon Territory)
J 32(7): 945 (white whale & narwhal habitat & fishery)
(11): 2111 (polychlorinated biphenyls presence & distribution in marine food chains)
S 2048 (insecticide & PCB levels in ringed seal in Canadian)
2083 (survival adaptation of rough-legged hawk by carrion feeding)
- Arctica islandica* (see Quahog, ocean)
- Argentine, Atlantic (*Argentina silus*)
T 526 (current status of stocks & recent annual catches in ICNAF areas)
- Argyle, Ray Leroy
J 32(11): 2197 (dieldrin effects on young channel catfish growth)
- Armstrong, Francis Adolph John
J 32(6): 795 (Hg in principal animal food items of the Inuit from Holman, N.W.T.)
S 2020 (microdetermination of Hg in environmental materials)
- Aroclor (see also Insecticides; Polychlorinated biphenyls)
J 32(10): 1705 (uptake by white suckers)
- Aromatic hydrocarbons and derivatives (see Hydrocarbons; Hydrocarbons, halogenated; Phenols; Polychlorinated biphenyls)
- Arsenault, E.
T 491 (properties, uses, & pollution potential of chlorinated paraffins)
- Arsenic derivatives
J 32(8): 1275 (limited dispersion in sea water, sediments, & biota near a continuing source)
(9): 1643 (in lumpfish & menhaden meals)
(12): 2385 (biosynthesis of organic derivatives from orally administered or injected inorganic, in brown trout)
T 488 (literature review of mine effluents effects on aquatic ecosystems)
555 (comparison of methods of determining in fresh water)
556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
S 2029 (comparison of ashing methods for determination in marine organisms)
A 324 (environmental pollutant potential & toxicity re biological uptake (review))
- Artediellus uncinatus* (see Sculpin, Arctic hooker)
- Artemia salina* (see Shrimp, brine)
- Arthropoda (see taxonomic subdivisions, also Crab; Crabs; Crayfish; Lobster; Shrimp; Shrimps)
- Ascomyllum* (see Pheophyta)
- Asellus* (see Isopoda)
- Ash (see Composition, chemical)
- Asper, Edward Dean
J 32(7): 1191 (techniques of live capture of smaller Cetacea)
- Aspidophoroides monopterygius* (see Alligatorfish)
- Assimilation (see Digestion; Feed; Metabolism)
- Assiniboine River, Man.
J 32(3): 407 (annual growth rates of mooneye)
S 2024 (supply rates of N & P nutrients re diversion of Missouri R. (USA) waters into)
- Astarte, ribbed (*Astarte undata*)
S 2031 (adductor muscle ultrastructure)

Asterias (see Starfish)

Atchison, G. J.

- J 32(12): 2513 (fatty acid levels in developing brook trout eggs & fry)

Athabaska, Lake (Alta. and Sask.)

- J 32(1): 171 (ecological impact of Bennett Dam (B.C.) on delta in Alta. from Peace-Athabaska rivers)

Atheresthes stomias (see Flounder, arrowtooth)

Atlantic Ocean (see also Caribbean Sea; Oceanography headings)

- J 32(7): 945-947 (distribution & fisheries for smaller cetaceans in N temperate, tropical, & S temperate regions)

- S 2065 (estimates of present state of petroleum hydrocarbon contamination in water columns between N.S. & Bermuda)

Atlas, Ronald M.

- J 32(12): 2564 (response of 2 arctic amphipods to temperature & salinity variations)

Atton, Fredrick Mervyn

- J 32(1): 101 (environmental impact assessment of hydroelectric projects in Canada — hindsight & foresight in Sask.)

Attractants (see also Baits; Chemoreception; Olfactory perception)

- J 32(6): 729 (effectiveness or otherwise, of various amino acids, pure compounds, & natural baits, to winter flounder, mummichog, Atl. silversides, & hagfish in their natural habitat)

- (9): 1674 (review of book on chemoreception in marine organisms)

- S 2012 (olfactory responses of American lobsters to various)

Availability (see Abundance; Angling; Catches; Fisheries)

Avoidance (see also Chemoreception; also types of physical stimuli (e.g. Light; Temperature) and chemical stimuli (e.g. Pollution; Toxicants) encountered by organisms; see also Stimuli (reaction of organisms to))

- S 2082 (of fenitrothion pesticide by goldfish)

B

Babine Lake, B.C.

- J 32(12): 2413 (phytoplankton succession & primary production)

- T 515 (purse-seine catches of young sockeye salmon & other fishes, 1973 data record)

Bacillariophyceae (see Diatoms)

Bacteria; Bacteriology (in addition to the references below, for *Aerococcus viridans* see Lobster pathogen; for *Flexibacter* (*Chondrococcus*) *columnaris* see Columnaris disease; see also Antibiotics; Antibody; Biodegradation; Disease; Disinfectants; Immunology; Preservatives; Quality of fishery products; etc.)

- J 32(1): 92 (bacterial kidney disease (BKD) from *Corynebacterium* appearing concurrently with a viral disease in 2 species of trout)

- (4): 541 (incidence of *Vibrio parahaemolyticus* in fish, shellfish, mud, water, and fish products of Canadian Atl. coast)

- (5): 599 (biomass estimation in soils & marine sediments by ATP-induced bioluminescence)

- (6): 739 (*Pseudomonas* most prevalent of several genera isolated from sea water used in laboratory culture of oyster)

- (8): 1243 (diagnostic procedures for gram-negative fish disease bacteria)

- (10): 1876 (nature of incorporated ¹⁴C-labelled material retained by H₂SO₄-fixed bacteria in pure cultures & natural aquatic populations)

- (11): 2025 (re nitrification in an aquatic recirculating system)

- (11): 2224 (fluorescent antibody identification & detection of *Corynebacterium* causing BKD of salmonids)

- S 2010 (measurement of microbial oxidation of methane in lake water)

- 2014 (oil dispersants effects on biodegradation by, & growth of *Paracolon*, *Pseudomonas*, *Vibrio*, *Aeromonas*, & *Achromobacter* on crude petroleum oil)

- 2030 (melanin biosynthesis from tyrosine by *Ae. salmonicida*)

- 2045 (role of types associated with seaweeds, re enzymic detrital feed chain)

Baits (see also Angling; Attractants; Chemoreception; Olfactory perception)

- J 32(6): 729 (attractiveness of, to some marine fishes in their natural habitat)

Baker, Dwight Lynds

- J 32(11): 2061 (activation energy of aspartate transcarbamylase from Atl. cod ovary)

Baker, Edgar George

- T 484 (instrumental color sorting of raw salmon in preparation for canning)

- 536 (storage of Pac. roe herring at sea)

Balaena mysticetus (see Whale, bowhead)*Balaenoptera acutorostrata* (see Whale, minke)*physalus* (see Whale, fin)*Balanus* (see Barnacles)

Ball, Robert Cragin

- J 32(8): 1289 (leucine aminonaphthylamidase localization in rainbow trout)

- Balon, Eugene Kornel
J 32(6): 821 (perspective article on reproductive guilds of fishes: a proposal & definition (corrections on J 32(8): 1505))
(9): 1663 (perspective on terminology of intervals in fish development)
- Barchard, Henry
T 538 (experimental diets effects on rainbow trout growth in salt water)
- Barica, Jan
J 32(8): 1283 (possible prediction of summerkill risk in SW Man. prairie ponds)
T 510 (geography & lake morphometry in Erickson-Elphinstone district of SW Man.)
511 (geochemistry & nutrient regime of saline eutrophic lakes in above district)
S 2019 (sediment mixing effect re extreme fluctuations in water quality of eutrophic fish kill lakes)
- Barium derivatives
J 32(9): 1643 (in lumpfish & menhaden meals)
T 488 (literature review of mine effluents effects on aquatic ecosystems)
509 (variation of amount in B.C. kelp during growing season)
A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Barnacles (Cirripedia)
MSP 26 (illustrations of *Balanus* sp. & *Chthamalus* sp. of Gulf Islands, B.C., marine parks)
- Barner, Leonard Walter
T 496 (1972 & 1973 SW Vancouver Is. offshore herring surveys)
503 (July-Dec. 1971 Juan de Fuca Strait herring surveys)
- Barnes, Audrey
T 575 (quality & quantity of deboned flesh recovered from various B.C. underutilized marine fishes)
- Baross, John A.
J 32(10): 1876 (nature of incorporated ^{14}C -labelled material retained by H_2SO_4 -fixed bacteria in pure cultures & natural aquatic populations)
- Barracudina, white (*Paralepis rissoi kroeyeri*)
T 521 (immature stages in Gulf of St. Lawrence plankton collections, 1969)
S 2089 (utilization of, as a source of wax esters, & protein (fish protein concentrate))
- Bass, black (see Basses)
- Bass, largemouth (*Micropterus salmoides*)
J 32(10): 1799 (production in a new S Carolina impoundment)
(11): 2153 (acetylcholinesterase re neuromuscular function in pectoral abductor muscle)
- Bass, redeye (*Micropterus coosae*)
J 32(10): 1799 (production in a new S Carolina impoundment)
- Bass, smallmouth (*Micropterus dolomieu*)
J 32(4): 485 (temperatures selected & avoided at various acclimation temperatures)
S 2017 (organochlorine residues, mercury, copper, & cadmium in, L. Erie)
- Bass, spotted (*Micropterus punctulatus*)
J 32(4): 485 (temperatures selected & avoided at various acclimation temperatures)
- Bass, striped (*Morone saxatilis*)
J 32(3): 416 (perfusion fixation of whole, for electron microscopy)
(10): 1864 (acute toxicity of crude petroleum oil benzene to young)
- Bass, white (*Morone chrysops*)
S 2017 (mercury, copper, cadmium, & organochlorine residues in, L. Erie)
- Basses (species collectively called blackbass)
J 32(12): 2584 (in America & overseas (book review))
- Bay of (see name of bay)
- Bayer 73 (see Lampricide)
- Beal, Albert Roger
J 32(2): 249 (selenium determination on fish tissue)
- Beamish, Frederick William Henry
J 32(5): 623 (system simulation of sea lamprey predation on lake trout)
S 2008 (long-term acidification of a lake & resulting effects on fishes)
- Beamish, Peter Charles
S 2079 (whale acoustics)
- Bear, polar (*Ursus maritimus*)
J 32(11): 2111 (polychlorinated biphenyls & DDT in tissues & milk of Canadian arctic & subarctic)
- Beauchamp, J. J.
J 32(11): 2227 (sublethal effect of 5-chlorouracil on carp larvae)
- Beaufort Sea
T 546 (sedimentation in vicinity of Mackenzie R. delta)
S 2053 (seasonal distribution of bowhead & white whales in E)
2054 (nutrients in S)
2055 (zoobenthos of S)
- Beck, Bryan
J 32(7): 1041 (narwhal in E Canadian waters)

- Bedford Basin, N.S.
T 500 (growth, etc., of cage-cultured blue mussel)
- Beeton, Alfred Merle
J 32(12): 2495 (toxicity of residual chlorine in power plant cooling waters to 2 copepods)
- Behavior (*Note: The following references are only indicative of the scope of this complex subject. See also Activity; Aggression; Chemoreception; Diel habits; Dominance; Ecology; Environment; Feed; Flow; Habitat; Homing; Light, reaction to; Limnology; Maturity; Migration; Movements; Oceanography; Olfactory perception; Pollution; Predation; Pressure, hydrostatic; Reproduction; Salinity; Schooling; Season effects; Sound, reaction to; Stress; Swimming; Temperature, reaction to; etc.*)
J 32(7): 891-945 (pertinent features in nature, & trainability, of many species of smaller cetaceans, by species)
(7): 1005 (pygmy right whale in South African waters)
(8): 1465 (& senses of aquatic organisms as investigated by FRB (summary))
(11): 2133 (influence of social rank on bluegill thermoselection)
T 502 (behavioral responses of lake whitefish & rainbow trout to drilling fluids)
S 2035 (territorial, of young Atl. salmon)
- Beitinger, T. L.
J 32(11): 2133 (social rank & size influence on bluegill thermoselection behavior)
- Bell, Gordon Russell
J 32(8): 1499 (review of book of color atlas of diseases of fishes, amphibians, & reptiles)
MSP 27 (practical guide to anatomy & physiology of Pac. salmon, specifically chinook, coho, & sockeye)
- Belone belone* (see Garfish)
- Beluga (see Whale, white)
- Bender, Michael E.
J 32(12): 2525 (acute toxicity of chlorine in estuarial waters to various species)
- Bennett Dam, B.C. (see Dams)
- Benthos (see also types of minute flora and fauna; also Insecta (and classifications of); Invertebrates (and classifications of); Sediments)
J 32(8): 1419 (size selection of various types of epibenthos prey by young chum salmon, Puget Sound, Wash.)
(8): 1455 (comparative toxicity of larval lampricide to selected macroinvertebrates of L. Michigan)
(9): 1657 (benthic organisms re marine ecosystems structure & biological oceanography)
(10): 1805 (quantitative assessment of faunal, in Gulf of Maine deep basins)
(11): 1989 (invertebrate, of Great Bear L., N.W.T., re fish species distribution)
(11): 2231, 2268, 2276 (perspective & 2 appendices re role of, in Canadian biological oceanography)
(12): 2535 (design of a small-boat otter trawl for collecting limnological)
(12): 2584 (lacustrine benthic ecology (book review))
T 468 (Fraser R. estuarial banks)
547; 548; 549; 550; 551; 554; 557 (re crude petroleum oil effects on, in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
(L. Superior mackerel invertebrates)
S 2055 (zoobenthos of arctic S Beaufort Sea)
2063 (size of winter flounder re size selection of its benthic invertebrate prey)
2074 (effects & fate of experimental crude petroleum oil spill on 2 Mackenzie R. delta lakes)
- Benzene
J 32(10): 1864 (as crude petroleum oil component: acute toxicity to young striped bass)
- Berardius arnuxii* (see Whale, Arnoux's beaked)
bairdii (see Whale, Baird's beaked)
- Berg, Richard E.
J 32(12): 2541 (first occurrence of brook silverside in a tributary of L. Superior)
- Bernard, Frank Reinhold
J 32(12): 2586 (review of book on culture of European flat oyster)
- Beryllium derivatives
A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Best, Peter Barrington
J 32(7): 1005 (new records of pygmy right whales from S. Africa, with comments on their distribution, migration, appearance, & behavior)
- Bibliographies (as distinct from usual list of references at end of publications) (see also Review papers)
T 482 (Canadian Atl. coast estuary studies)
504; 566 (second & third lists of 1000 references to Canadian limnology & fisheries, keyed to alphabetical lists of freshwater bodies by provinces & territories (for first list see T 471 (1974))
527; 528; 529; 530 (effects of hydroelectric developments on biology of: lake whitefish; northern pike; yellow walleye; lake trout))
534 (annotated, covering practically all aspects of underwater biotelemetry)
- Bigg, Michael Andrew
J 32(7): 1213 (live-capture killer whale fishery, B.C. & Washington)

- Biggar, C. A.
J 32(2): 227 (antioxidants for deterring deterioration of canned lake whitefish)
- Bilinski, Edward
T 514 (survey & characterization of commercial canned Pac. herring fillets with sauces)
569 (quality & quantity of herring roe produced under B.C. industrial processing conditions)
S 2056 (freshness of iced salmonids re lactic acid formation in muscle extracts)
- Bilton, Herbert Thomas
S 2052 (starvation & feeding effects on scale circulus formation in races of young kokanee & Pac. salmon)
- Binding agents (see Complexation)
- Bioaccumulation of metal compounds in organisms (see also Metal ions; names of metal elements, also names of organisms and tissues)
A 324 (review)
- Bioassay (Note: Toxicity levels of pollutants and other substances as determined by their effects on fish or other organisms, also use of radioactive isotopes as tracers, are not included here. See also Analysis methods (chemical); Apparatus; Photosynthesis; Pollution; Toxicants; also names of chemical elements; purpose or type of assay; names of organisms used for the assay)
J 32(2): 314 (automatic brine shrimp feeder for aquatic)
(3): 411 (Na pentachlorophenate & dehydroabiatic acid as reference toxicants for salmonids)
(4): 544 (multichannel toxicant injection system for flow-through)
(10): 1849 (apparatus for continuously saturating water with hydrophobic organic chemicals being tested for toxicity)
T 464 (see J 32(3) reference above)
486 (of toxicity of Imol lubricant to guppy & rainbow trout)
- Biochemistry (see names of organisms, their organs and functions; chemical elements and types of compounds involved in biochemistry; also Enzymes and other headings commencing with Bio...)
- Biodegradation (see also Bacteria; Effluents; Enzymes; Pollution)
J 32(3): 333 (of phthalate plasticizers in freshwater hydrosol)
(6): 789 (of pulp mill effluents)
(6): 817 (of kokanee; effects on subalpine stream ecology)
(11): 2125 (of phenolic compounds downstream from a St. Lawrence R. petroleum oil refinery)
T 491 (chlorinated paraffins)
553 (crude oil, by enrichment of nutrients in a Mackenzie R. delta lake, N.W.T.)
S 2014 (effect of oil dispersants on growth of bacteria on crude oil)
- 2074 (effect & fate of crude oil experimental spill on 2 Mackenzie R. delta lakes)
- Bioenergetics (see also Activity; Metabolism; Photosynthesis; Production, primary; Respiration; Stress; Swimming)
J 32(1): 33 (re optimal swimming speed, growth, & metabolism of a pelagic fish (bleak))
B 190 (hydrodynamics & energetics of fish & some marine mammal propulsion (has its own index))
S 2044 (of *Clione limacina* pteropod)
2075 (production efficiency in planktonic communities)
- Biolimnology (see also Benthos; Experimental Lakes Area; Lakes; Limnology; Mackenzie River and drainage system; Nutrients, aquatic; Productivity; also names of lakes)
T 504; 566 (1000 references to Canadian, keyed to alphabetical lists of freshwater bodies by provinces & territories)
- Biological oxygen demand (see also Biodegradation; Bioenergetics; Effluents; Oxygen, dissolved; Pollution)
T 511 (of waters & sediments of some SW Man. prairie pothole lakes)
- Bioluminescence
J 32(5): 599 (luciferin reaction for adenosine triphosphate in soils & marine sediments bacterial biomass)
- Biomass (see also Abundance; Benthos; Phytoplankton; Plankton; Populations; Productivity; Zooplankton)
J 32(3): 427 (& production re dynamics of exploited lake whitefish & their management, particularly in N.W.T.)
(9): 1613 (of stock re recruitment of S Gulf of St. Lawrence cod)
(10): 1785 (of yellow perch re varying phytoplankton & benthic biomasses)
T 468 (zonation of intertidal benthic, from Fraser R. estuarial banks, B.C.)
512 (phytoplankton, in some SW Man. prairie pothole lakes)
513 (phytoplankton, in some NW Ont. lakes following artificial eutrophication)
523 (mathematical representation & prediction of phytoplankton)
568 (estimates of B.C. kelp)
S 2055 (zoobenthos, in arctic S Beaufort Sea)
- Biosynthesis (see also Bioassay; Enzymes; Photosynthesis; Productivity, primary)
J 32(1): 61 (incorporation of glycerol-3-phosphate into rainbow trout liver lipids)
(9): 1633 (of lecithin by cholinephosphotransferase in rainbow trout liver microsomes & its function in environmental temperature adaptation)

- (12): 2385 (of organic arsenic compounds from inorganic radioactive arsenic injected in brown trout)
- S 2030 (of melanin from tyrosine by fish pathogen *Aeromonas salmonicida*)
- Biotelemetry (see also Sounding, echo; Tracking; Ultrasonics)
- J 32(7): 961 (methods for smaller cetaceans)
- T 534 (underwater: annotated bibliography covering practically all aspects of)
- Biphenyl derivatives (for monochloro, see Hydrocarbons, halogenated; for more fully chlorinated, see Chlorobiphenyls; Perchlorinated biphenyls)
- Birds (see also Feathers)
- S 2013 (easternmost record of horned puffin in Canada)
- 2038 (pentachlorophenol in eggs of N.B. double-breasted cormorant & herring gull)
- 2083 (rough-legged hawk as arctic carrion feeder)
- Bishop, Jean Louise
- J 32(6): 739 (types of bacteria isolated from sea water used in laboratory culture of American oyster)
- Bismuth derivatives
- A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Bivalves (see Pelecypoda; also classifications of and common names of species)
- Black, Robert
- J 32(8): 1275 (arsenic dispersion in sea water, sediments, & biota, near its source)
- Black, W. R.
- S 2081 (some biological interactions affecting intertidal populations of a kelp)
- Blackbass (see Basses)
- Blackcod (see Sablefish)
- Blackfly (see Diptera)
- Bladder, swim (see Swimbladder)
- Bleak (*Alburnus alburnus*)
- J 32(1): 33 (growth, metabolism, & optimal swimming speed)
- Blenny, eel (see Cockscomb)
- Blenny, snake (see Snakeblenny)
- Bligh, Emerson Graham
- A 328 (functional & nutritive food proteins from fish)
- Blood; Blood constituents (see also Enzymes; Heart; Respiration; Vasculature)
- J 32(1): 78 (Zn, Cu, & total protein levels in plasma of spawning migratory sockeye salmon)
- (4): 541 (incidence of *Vibrio parahaemolyticus* in environment & fishery products)
- (4): 551 (statistical methods for estimating normal ranges & variations in chemistry of rainbow trout)
- (5): 699 (simple & rapid technique for repeated sampling in rainbow trout)
- (8): 1289 (leucine aminonaphthylamidase in rainbow trout)
- (9): 1539 (oxygen dissociation characteristics of winter flounder)
- (11): 2015 (effects of oral administration of CH_3HgCl on young rainbow trout)
- (12): 2295 (re minimal dissolved oxygen requirements of aquatic life (review))
- (12): 2357 (cell count sensitivity to stress in young coho salmon exposed to pulp mill effluent & Zn; also as index of pollution or disease stress in fishes)
- (12): 2538 (colloid osmotic pressure changes in spawning Pac. salmon)
- (12): 2559 (functional hematology re stress & deep dives, of ringed seal)
- Blubber
- J 32(7): 1163 (& products from Norwegian small-whale fishery)
- (11): 2205 (chlorinated hydrocarbons in, of various whales & dolphins)
- S 2048 (DDT, DDE, & PCB levels in ringed seal, Canadian arctic)
- 2070; 2080 (chemical composition of fats in various whales, dolphins, & porpoises)
- Bluegill (*Lepomis macrochirus*)
- J 32(1): 88 (re hybridization with pumpkinseed)
- (4): 485 (temperatures selected & avoided at various acclimation temperatures)
- (6): 769 (pH effects on antimycin toxicity to)
- (10): 1799 (production in a new S Carolina impoundment)
- (10): 1860 (tilt of body toward dorsal light as index of prey preference)
- (11): 2133 (influence of social rank & size on thermo-selection behavior of young)
- Bocaccio (*Sebastes paucispinis*)
- T 496 (catches during B.C. herring survey off SW Vancouver Is., 1972 & 1973)
- 497 (catches during groundfish survey in Queen Charlotte Sound area, B.C., 1974 data record)
- 542 (catch & effort statistics of B.C. commercial groundfish fishery, 1974 data record)
- 565 (length re age, geographically in NE Pac. Ocean)
- 575 (yield & composition of deboned flesh from headed & gutted)

Boeckosimus (see Amphipoda)

Bolocera tuediae (see Sea anemones)

Bone

- J 32(5): 593 (toxaphene insecticide effects on backbone collagen amino acid composition in fathead minnows)
 (5): 609 (toxaphene effects on collagen & backbone development in brook trout)
 (11): 2065 (proliferative tumorlike lesions on lake whitefish skeleton)
 CHN 50 (separation from Atl. fish flesh)
 T 574 (modified processing of an improved breaded flesh product from mechanically deboned freshwater fish (e.g. white sucker))
 575 (quality & quantity of deboned flesh recovered from various B.C. underutilized marine fishes)
 S 2026 (simple isolation of, in minced fish flesh samples, by chemical dissolution of the flesh)

Book reviews (see Reviews of books)

Booke, Henry Edward

- J 32(2): 295 (cytotaxonomy of *Stenodus leucichthys* salmonid)

Books received (lists of recent books, with brief notes on contents, received at Fisheries and Marine Service, Office of the Editor, Ottawa, Ont.)

- J 32(4): 572; (5): 720; (6): 867; (8): 1502; (9): 1675; (10): 1935; (12): 2587

Borg ter, Lynda

- T 569 (quality & quantity of herring roe produced under B.C. industrial processing conditions)

Boron and derivatives

- J 32(6): 813 (simplified spectrophotometric curcumin method for determination in marine shellfish)
 (9): 1643 (in lumpfish & menhaden meals)
 (12): 2487 (effects of borate pollution on marine phytoplankters growth)
 T 509; 568 (variation of amount in B.C. kelp during growing season, as borate)
 S 2011 (acceptor ability of cyclic boron ester groups)

Bose, Robert John

- T 535 (clinoptilolite zoolite application to ammonia removal in hatchery & aquaculture reuse systems)
 S 2011 (acceptor ability of the -B(OR)₂ boronic ester group)
 2027 (chromatographic methods for isolation of miserotoxin & detection of aliphatic nitro compounds)

Bottom organisms (see Benthos; also names or types of organisms)

Bottom sediments (see Sediments)

Bosmina (see Cladocera)

Botta, Joseph Richard

- J 32(11): 2039, 2047 (preservation of inshore male capelin stored in ice or in refrigerated sea water)

Bouck, Gerald Ray

- J 32(8): 1289 (leucine aminonaphthylamidase localization in rainbow trout)

Boundary Pass (B.C. & Washington) (see Georgia, Strait of)

Boutu (*Inia geoffrensis*) (an upper Amazon River freshwater dolphin)

- J 32(7): 943 (overview)
 S 2080 (comparative lipid patterns of acoustical & nonacoustical fatty tissues)

Bowden, K. F.

- S 2085 (some features of turbulent diffusion from a continuous source at sea)

Bowes, Gerald W.

- J 32(11): 2111 (polychlorinated biphenyls in arctic & subarctic marine food chains)

Bowhead (see Whale, bowhead)

Boyd, John Frank

- J 32(1): 69 (Furanace antimicrobial effects on mummichog larvae)

Brachiopoda

- S 2028 (climatic control of, evidenced by fossil (*Rugoschonetes* sp. & *Productus hibernicus* in shales)

Brachydanio rerio (see Zebrafish)

Brachypterinae (see Plecoptera)

Brackeveld, Charlie Roger

- J 32(10): 1711 (northern pike photoreceptor fine structure)

Brackkan, Olaf Richard

- J 32(5): 699 (simple rapid technique for repeated blood sampling in rainbow trout)

Brain

- J 32(4): 563 (histopathology of channel catfish virus diseased)

Bras d'Or Lakes (tidal), Cape Breton Island, N.S.

- T 570 (physical oceanography, 1972-74)

Brett, John Roland

- J 32(11): 2103 (young sockeye salmon growth re fish size & ration level)
 (12): 2479 (daily pattern of urea & ammonia excretion & oxygen consumption of young sockeye salmon under controlled conditions)

- B 188(F) 53 (marine fish aquaculture in Canada (French edition of 1974 English edition))
 S 2066 (tank culture of pan-size sockeye & pink salmon using environmental control)
- Brevoortia tyrannus* (see Menhaden, Atlantic)
- Bridges, David Wilder
 J 32(9): 1539 (blood oxygen dissociation characteristics of winter flounder)
- Brill (Atlantic) (see Windowpane)
- Brill (Pacific) (see Sole, petrale)
- Brinckmann-Voss, Anita
 T 492 (B.C. marine faunistic survey report on medusae)
- Brining
 T 536; 569 (B.C. herring re quality of roe processed therefrom)
- Brinkhurst, Ralph Owen
 T 482 (bibliography of Canadian Atl. coast estuary studies)
- Brisaster fragilis* (see Heart urchin)
- British Columbia (Province (B.C.), Canada) (see also Alberni Inlet; Babine Lake; Dams; Fisheries; Fraser River system; Georgia Strait; Hydroelectric projects; Inlets; Queen Charlotte Sound; Skagit River valley; Skeena River system; Vancouver Island; also names of fishes)
 J 32(1): 196 (table of details of 16 reservoirs for hydroelectric power)
 (7): 1213 (live capture of killer whales for oceanaria)
 (9): 1561; (11): 2075 (oceanography of deep-water S inlets & other enclosed waters)
- CNG 100 (life history, fishery, management & research, & future prospects of Pac. herring as a resource)
 T 492 (survey of hydrozoan medusae)
 504; 566 (alphabetical lists of freshwater bodies, keyed to list of a further 1000 references to Canadian limnology & fisheries)
 509; 561; 568 (kelp as a resource)
 514; 536; 569 (herring products)
 562 (stream ecology research problems)
 MSP 26 (seashore life of Gulf Islands, off SE Vancouver Is. (illustrated poster; map))
- Brittle stars
 J 32(10): 1805 (*Ophiura* & *Amphiura otteri* in Gulf of Maine deep basins)
 MSP 26 (drawing of an *Ampidodia* species typical of Gulf Is. marine parks, B.C.)
 S 2055 (of arctic S Beaufort Sea zoobenthos)
- Brockerhoff, Hans
 S 2069 (lipolytic enzymes (review))
- Brodie, Paul Frederick
 J 32(7): 1047 (identity, abundance, & present status of white whale population in N America)
- Bromine derivatives
 T 561 (estimation & content of bromide in B.C. kelp during growing season)
- Brooks, Arthur S.
 J 32(12): 2495 (toxicity of residual chlorine in power plant cooling water to 2 copepods)
- Brosme brosme* (see Cusk)
- Brown, Carolyn
 J 32(6): 739 (types of bacteria isolated from sea water used in laboratory culture of American oyster)
- Brown, David Arthur
 J 32(6): 753 (effects of exposure to pulpmill effluent on young coho salmon carbohydrate metabolism during rest & exercise)
 (12): 2528 (effect of pulpmill effluent on survival of starved young coho salmon)
- Brown, George Willard, Jr.
 J 32(1): 21 (speciation of a freshwater *Cottus* sculpin population in L. Washington, Wash.)
- Brown, S. G.
 J 32(7): 1095 (stranding mortality re population abundance of smaller Cetacea in NE Atl. Ocean)
 (7): 1237 (marking small cetaceans using "Discovery" type whale marks)
- Brown, Thomas James
 J 32(1): 72 (primary productivity inhibition from phytoplanktonic vs. heterotrophic organisms competition for nitrate in stratified estuarial waters of Alberni Inlet, B.C.)
- Brownell, Robert Leo, Jr.
 J 32(7): 1073 (biology of Franciscana dolphin in Uruguayan waters)
- Brunskill, Gregg John
 T 546; 566 (1); 566 (2) (chemistry, mineralogy, & transport rates of sediments in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
 553 (crude oil & nutrient enrichment studies in a Mackenzie R. delta lake)
 S 2024 (supply rates of N & P to L. Winnipeg, Man., re a river diversion project)
- Bryan, James Earnest
 J 32(2): 283 (spawning of lake & round whitefish in a Yukon lake & river)
- Bubble shell (*Haminoea virescens*)
 MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)

- Buchanan, David Vardyn
J 32(10): 1880 (improved flowing water apparatus for crab larvae culture)
- Buerkle, Udo
T 563 (effect of underwater noise from offshore oil drilling on fish)
S 2032 (gillnet catches of Atl. cod re trawling noise)
- Buhler, Donald Raymond
J 32(12): 2391 (Hg, Me-Hg, Cd, & chlorinated hydrocarbon residues in California sea lions)
- Bull (cattle)
S 2018 (malic enzymes in spermatozoa)
- Bullhead, black (*Ictalurus melas*)
J 32(2): 303 (buoyancy adjustment to change in water velocity)
- Bullhead, brown (*Ictalurus nebulosus*)
J 32(10): 1799 (production in a new S Carolina impoundment)
- Bullhead, flat (*Ictalurus platycephalus*)
J 32(10): 1799 (production in a new S Carolina impoundment)
- Bullhead, snail (*Ictalurus brunneus*)
J 32(10): 1799 (production in a new S Carolina impoundment)
- Bullock, Graham Lambert
J 32(8): 1243 (diagnostic procedures for pathogenic bacteria of fish diseases)
(11): 2224 (antibody identification & detection of bacterium causing kidney disease of salmonids)
- Buoyancy (of organisms) (see also Swimbladder; Swimming)
J 32(2): 303 (adjustments by tadpole madtom & black bullhead in response to water velocity change)
- Burbot (*Lota lota*) (ling)
J 32(11): 1989 (distribution, Great Bear L., N.W.T.)
T 515 (purse-seine catches, Babine L., B.C., 1973 data record)
- Burnham, Bernard Lont
J 32(6): 809 (saline N Dakota lake water effects on fathead minnow embryo & sac fry survival)
- Buroker, Norman E.
J (12): 2471 (genetic variation in Pac. oyster)
- Burt, Michael David Brunskill
J 32(11): 2069 (abundance & population dynamics of parasites infecting Atl. salmon in Trout Brook, N.B.)
- Burton, Ronald
T 498 (methods of analyzing feathers for elemental content)
- Busch, R. A.
J 32(12): 2429 (asymptomatic carrier state infection of enteric redmouth disease in rainbow trout)
- Busch, Wolf-Dieter N.
J 32(10): 1733 (environmental effects on W Lake Erie walleye year-class strengths)
- Busdosh, M.
J 32(12): 2564 (response of 2 arctic amphipods to temperature & salinity variations)
- Bustard, David Ronald
J 32(5): 667 (winter ecology aspects of young coho salmon & steelhead trout)
(5): 681 (young coho salmon & cutthroat trout preferences re simulated alteration of winter habitat)
- Bute Inlet, B.C.
J 32(9): 1561; (11): 2075 (deep-water properties variation)
- Buteo lagopus* (see Hawk, rough-legged)
- Butterfish (*Peprilus triacanthus*)
CHN 50 (separation of bone & minced flesh from headed & gutted)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Buxton, Gerald Alden
J 32(2): 233 (ultrasonic tracking of sockeye salmon in Skeena R. estuary, B.C.)

C

Caddisflies (see Trichoptera)

Caddy, John Frederick
J 32(8): 1305 (spatial mathematical model for an exploited shellfish population)

Cadmium derivatives
J 32(9): 1643 (in lumpfish & menhaden meals)
(10): 1755 (re heavy-metal binding components of river waters near Ottawa, Ont.)
(12): 2391 (in California sea lion tissues, primarily in kidney)
T 488 (literature review of mine effluent effects on aquatic ecosystems)
509 (variation of amount in B.C. kelp during growing season)
555 (comparison of methods for determining in fresh waters)
556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)

- S 2017 (in yellow perch, white & smallmouth bass, L. Erie)
 2057 (chloride-induced effects on maturation & testosterone & ketotestosterone in living brook trout)
 A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Cage (see Pen, fish)
- Cairns, John, Jr.
 J 32(4): 485 (temperature preferences of fish at various acclimation temperatures (addendum on J 32(8): 1505))
- Calanoida
 J 32(4): 461 (*Diaptomus*, *Limnocalanus*, *Senecella*, etc., in L. Superior outlet)
 (5): 706 (*Pseudocalanus minutus* selective feeding (correction on J 32(8): 1505))
 (9): 1589 (effects of goldfish predation on *D. ashlandi* of a small saline lake)
 (10): 1845 (accumulation of DDT & apparent lack of its metabolism by cultured *Calanus finmarchicus* & *C. hyperboreus*)
 (11): 2189 (*Metridia pacifica* ammonia & inorganic phosphorus secretion)
 (12): 2495 (toxicity to *L. macurus* of residual chlorine in power plant cooling waters)
 (12): 2525 (sensitivity of *Acartia tonsa* to traces of chlorine in estuarial waters)
 T 533 (*L. macurus* most abundant, in some N.W.T. experimentally cropped lakes)
 S 2086 (*C. finmarchicus* biochemical & mineral composition, St. Margaret's Bay, N.S.)
- Calanus* (see Calanoida)
- Calcium derivatives
 J 32(9): 1643 (in lumpfish & menhaden meals)
 T 498 (analysis for, in feathers)
 509 (variation in B.C. kelps over growing season)
 511 (ionic concentrations in SW Man. prairie pot-hole lakes)
 S 2008 (in blood serum of fishes in a long-term acidified lake, & effects thereon)
 2086 (in phytoplankton & 2 zooplankton species, St. Margaret's Bay, N.S.)
- Caldwell, David Keller
 J 32(7): 1105 (occurrence, history, & catch statistics of dolphin & small-whale fisheries of the Caribbean, particularly St. Vincent)
 S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues of dolphins, porpoises, & toothed whales)
- Caldwell, Melba Carstarphen
 J 32(7): 1105 (occurrence, history, & catch statistics of dolphin & small-whale fisheries of the Caribbean, particularly St. Vincent)
 S 2080 (comparative lipid patterns in acoustical and nonacoustical fatty tissues of dolphins, porpoises, & toothed whales)
- Caldwell, Richard S.
 J 32(10): 1880 (improved flowing water apparatus for larval crab culture)
- Calianassa californiensis* (see Shrimp, ghost)
- California, USA
 J 32(12): 2585 (intertidal invertebrates of central coast (review of manual on))
- Caligoida
 B 192 (catalogue & synopsis of *Caligus* species)
- Caligus* (see Caligoida)
- Callorhinus ursinus* (see Seal, northern fur)
- Camera (see Photography)
- Campbell, Lucy M.
 J 32(11): 2025 (nitrification in an aquatic recirculating system)
- Campbell, Norman Ebenezer Ross
 S 2010 (measuring microbial oxidation of methane in lake water)
- Campbell, P. G. C.
 J 32(11): 2125 (degradation of phenolic compounds downstream from a petroleum oil refinery)
- Campbell, Paul J.
 T 545 (assessment of 2 methods for determining low suspended sediment concentrations in natural waters)
 546; 556(1); 556(2) (chemistry, mineralogy, & transport rates of sediments in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
- Camptostoma anomalum* (see Stoneroller)
- Canada (see also names of the provinces; Northwest Territories; Yukon Territory; also Fisheries; Fisheries Research Board of Canada; International commissions)
 J 32(8): 1465-1490 (perspective on 75 years of Fisheries Research Board of Canada's achievements)
 (10): 1887-1932 (perspective on science for Canada's shelf-seas fisheries)
- Cancer irroratus* (see Crab, rock)
magister (see Crab, Dungeness)
- Canis familiaris* (see Dog (sledge))
lupus (see Wolf (arctic))
- Canning; Canned products

- J 32(2): 227 (antioxidants re control of oxidative deterioration in canned lake whitefish)
- T 484 (color sorter for Pac. salmon flesh raw vs. after canning)
- 514 (survey & characterization of Canadian & imported types of herring)
- 536 (quality of lightly smoked fillets from Pac. herring stored at sea)
- S 2006 (collecting & concentrating headspace volatiles for gas-chromatographic analysis)
- A 323 (American lobster processing)
- Capelin (*Mallotus villosus*)
- J 32(4): 507 (fat & moisture composition, & fatty acids of some lipid extracts & commercial oil triglycerides of Canadian, 1972-73)
- (11): 2039, 2047 (ice vs. refrigerated sea water for storing inshore male)
- B 186(F) (biology, distribution, composition & utilization (French edition of 1974 English edition))
- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Caperea marginata* (see Whale, pygmy right)
- Carapace (see Molting)
- Carbohydrate (see also Glycogen)
- J 32(6): 753 (pulpmill effluent effects on metabolism of, in young coho salmon)
- Carbon (Note: Applications of radioactive ^{14}C as a biochemical tracer are too numerous to index separately; some are included in references under Nutrients, aquatic; Photosynthesis; Phytoplankton; Productivity, primary; Radiation; also other cognate subjects)
- Carbonate
- T 511 (as nutrient in some SW Man. prairie pothole lakes)
- 547; 556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- 568 (content of B.C. kelp during growing season)
- Carcharodon carcharias* (see Shark, white)
- Carcinus maenas* (see Crab, shore)
- Caribbean Sea
- J 32(4): 499 (humpback whale population estimates)
- (7): 1105 (dolphin & small whale fisheries)
- Caribou (*Rangifer tarandus*)
- J 32(6): 795 (mercury in, from Holman, N.W.T.)
- Caribou Bar Creek, Yukon Territory, Canada
- T 546; 556(1); 556(2) (chemistry, mineralogy, & transport rates of sediments)
- 547 (ecological studies of aquatic organisms re sedimentation; also mudslide on)
- 550; 551 (effects of crude petroleum oil experimental spills on zoobenthos, re oil pipeline & highway projects)
- 557 (species list of aquatic plants & animals collected in 1971-73)
- Carnation Creek, Vancouver Island, B.C.
- J 32(5): 667, 681 (aspects of winter ecology & preferences re simulated alteration of winter habitat of young trouts & coho salmon, in this as yet unlogged coastal rainforest stream watershed)
- T 558 (attached algal growth determinations)
- 564 (water, water chemistry, & hydrochemical balance of dissolved ions in waters)
- Carotenoids (see Pigments)
- Carp (*Cyprinus carpio*)
- J 32(6): 769 (pH effects on antimycin toxicity to)
- (10): 1799 (production in a new S. Carolina reservoir)
- (11): 2227 (sublethal effect of 5-chlorouracil on larvae)
- Carpiodes cyprinus* (see Quillback)
- Carpsucker, quillback (see Quillback)
- Carrothers, Percival John Godber
- J 32(6): 865 (review of book on netting materials for fishing gear)
- (6): 866 (review of book on modern inshore fishing gear—rigging and mending)
- Carscadden, James Eric
- J 32(5): 653 (meristic differences & homing in American shad spawning populations)
- Carson, William George
- S 2049 (thallium occurrence in environment & toxicity to fish)
- Carson, William Victor
- S 2049 (thallium occurrence in environment & toxicity to fish)
- Carter, John Charteris Haig
- J 32(3): 341 (population dynamics of Cladocera in a beaver pond)
- (12): 2530 (crustacean plankton communities & their variation with predation, Matamek R. system, Que.)
- Carter, Neal Marshall
- J 31 2001-2165 (subject-author index to that volume, issued as separate in 1975)
- Casein
- J 32(3): 422 (amino acid supplementation of, in Atl. salmon fry diets)

- Castell, John Daniel
J 32(8): 1431 (cholesterol requirements of young American lobster)
- Catchability (see Abundance; Angling; Baits; Catches; Fisheries)
- Catches (see also Angling; Fisheries; Surveys; Yield; also names of aquatic animals contributing to commercial fisheries)
J 32(7): 891-945 (of various species of smaller cetaceans, by species), 945-952 (by ocean regions), 956 (inadvertent or incidental, of smaller cetaceans during other fishing), 958 (types of statistics desired for smaller cetaceans)
(7): 1079 (smaller cetaceans in Greenland)
(7): 1105 (dolphins & small whales, Caribbean & West Indies, particularly St. Vincent)
(7): 1111 (Japanese small whales)
(7): 1223 (by-catches of harbor porpoise in salmon driftnets, W Greenland)
(7): 1229 (incidental, of smaller cetaceans with salmon drift gillnets during Japanese NW Pac. fishing)
(8): 1305 (spatial model of catch & effort variations in Georges Bank scallop fishery off N.S.)
(8): 1369 (revised interpretation of history of Skeena R., B.C., commercial sockeye salmon)
(8): 1383 (re changes in abundance & biology of American plaice of Grand Bank, off Nfld.)
(10): 1777 (optimal harvest strategies for Skeena R. sockeye salmon)
(11): 2163 (catch per effort vs. catch plotting, for estimating parameters for a Schaefer model of a fishery)
(12): 2520 (statistical bias problem in on-site surveys of catch & effort)
T 496; 503 (of herring, dogfish, chinook salmon, & other species, during B.C. herring surveys offshore SW Vancouver Is., 1972 & 1973; Juan de Fuca Strait, 1971)
497 (Pac. ocean perch & other fishes, during Sept. 1974 groundfish survey in Queen Charlotte Sound area, B.C.)
515 (young sockeye salmon & other fishes by purse seining, Babine L., B.C., 1973 data record)
526 (tables for recent years, of Atl. offshore groundfish fisheries under ICNAF jurisdiction)
531 (& effort of sea cucumbers in Passamaquoddy Bay, N.B.)
542 (catch & effort statistics 1974 data record for B.C. commercial groundfish fishery)
S 2032 (gillnet catches of Atl. cod re trawling noise)
(8): 1459 (hepatic morphology & acid phosphatase localization)
(10): 1867(F) (age determination from spiny fin rays & tagging, re growth of in St. Lawrence R. near Quebec City, Que.)
(11): 2025 (re effects of nitrification in an aquatic recirculating system)
(11): 2197 (dieldrin uptake from diet & effect on growth of young)
- Catostomus catostomus* (see Sucker, longnose)
commersoni (see Sucker, white)
macrocheilus (see Sucker, largescale)
- Cech, Joseph Jerome, Jr.
J 32(9): 1539 (blood oxygen dissociation characteristics of winter flounder)
- Cell structure (see Cytology)
- Census (see also Abundance; Angling; Counting; Sounding, echo)
J 32(4): 499 (visual & acoustic, re humpback whale population estimates)
(7): entire issue (world-wide estimation of numbers of smaller cetaceans)
(7): 1055 (aerial, of bottlenose dolphin, Florida)
S 2053 (aerial & otherwise, of bowhead & white whales in E Beaufort Sea)
- Cephalorhynchus commersoni* (see Dolphin, Commerson's)
eutropia (see Dolphin, black)
heavisidii (see Dolphin, Heaviside's)
hectori (see Dolphin, Hector's)
- Ceratomyxa* (see Ceratomyxosis)
- Ceratomyxosis
J 32(9): 1545 (water temperature re, in rainbow trout & coho salmon, from parasitization by *Ceratomyxa shasta* myxosporidian)
(9): 1640 (in B.C. chum salmon, a new host of the causative organism & extension of its range into B.C.)
- Ceratopogonidae
T 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
- Ceriodaphnia* (see Cladocera)
- Cestoda (see also Parasites)
J 32(7): 1073 (parasitic in Franciscana dolphin)
- Cetacea (see also Beluga; Boutu; Cochito; Dolphin(s); Franciscana; Narwhal; Porpoise(s); Susu; Tucuxi; Whale(s))
J 32(7): entire issue (proceedings & papers of meeting of Subcommittee on Small Cetaceans, International Whaling Commission, Montreal, April 1-11, 1974. (See pages 875-877 for list of topics reported on pages 889-983 & list of invited papers included on pages 985-1240))

- (11): 2205 (chlorinated hydrocarbons (DDT, PCB, chlordane, & dieldrin) levels in blubber of some whales & dolphins)
- Chaetognatha
S 2086 (*Sagitta elegans* biochemical & mineral composition, St. Margaret's Bay, N.S.)
- Chang, Blythe Damon
J 32(2): 243 (metabolism of *Anisogammarus pugettensis* amphipod re its trophic position in food web of young salmonids)
- Chang, Philip Shen-sin
T 554 (emergence periods of insects in an oil-polluted vs. a normal lake, Mackenzie R. delta, N.W.T.)
- Channel catfish virus disease (see Catfish, channel; Disease; Viruses)
- Chanut, Jean-Pierre
J 32(5): 706 (nonselective feeding of *Pseudocalanus minutus* copepod (correction on J 32(8): 1505))
- Chaoborus (see Diptera)
- Char, Arctic (*Salvelinus alpinus*)
J 32(5): 689 (movements & growth of young, in a small arctic stream, Alaska)
(6): 795 (mercury in, from Holman, N.W.T.)
(11): 2111 (polychlorinated biphenyls & DDT in tissues of Canadian)
- Chelation (see Complexation)
- Chemical analysis methods (see Analysis methods (chemical); Apparatus)
- Chemical composition (see Analysis methods (chemical); Composition, chemical; also names of chemical elements & types of compounds)
- Chemoreception (see also Attractants; Baits; Behavior; Olfactory perception)
J 32(9): 1674 (review of book on chemoreception in marine organisms)
(11): 2055 (of American lobster in presence of copper & phosphamidon)
S 2082 (re goldfish avoidance of fenitrothion pesticide)
- Cheng, Joseph Yim-hung
J 32(12): 2487 (effects from borate pollution on marine phytoplankters growth)
S 2067 (*cis-trans* isomerization of alloxanthin & isolation of an unusually stable *cis*-isomer from a marine cryptomonad algal culture)
2068 (wax ester production from a marine cryptomonad culture)
- Cherry, Donald Stephen
J 32(4): 485 (temperature preferences of fish at various acclimation temperatures (addendum on J 32(8): 1505))
(10): 1799 (feed habits of L. Keowee, S. Carolina, fishes)
- Chew, Kenneth Kendall
J 32(12): 2471 (genetic variation in Pac. oyster)
- Chile
J 32(7): 1123 (research on small cetaceans)
- Chilling (biological) (see Temperature, biological effects; Winterkill)
- Chilling (of fishery products) (see also Ice; Refrigeration; Sea water, refrigerated; Superchilling)
T 536 (of Pac. roe & male herring re quality of flesh & of roe for processing)
- Chionoecetes bairdi* (see Crab, tanner)
opilio (see Crab, snow)
- Chironomidae (midges)
J 32(2): 259 (2 new species, *Heterotanytarsus perennis* & *H. nudalus*, with keys to Nearctic & Palaearctic males & pupae of the genus)
(3): 367 (2 new species, *Protonypus ramosus* & *P. hamiltoni*, with keys to Nearctic & Palaearctic species of the genus)
B 193 (5 new species, *Heterotrissocladius oliveri*, *H. latilaminus*, *H. hirtapex*, *H. cooki*, & *H. changi*, with keys to Nearctic & Palaearctic adults & pupae of the genus; morphology & ecology)
T 547; 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
554 (emergence of, from an oil-polluted & an unpolluted lake in Mackenzie R. delta)
572 (collected in L. Superior)
S 2042 (use as indicators of macroinvertebrate diversity, re dieldrin insecticide)
2043 (morphology & terminology of female genitalia of *Chironomus tentans*)
2077 (effects of fenitrothion pesticide on)
- Chironomus* (see Chironomidae)
- Chisholm, Sallie Watson
J 32(2): 219 (filtering & feeding rates control in arctic *Daphnia*)
- Chitin
A 323 (composition, & chemical products from by-products of lobster processing)
- Chitons
MSP 26 (drawings of *Mopalia* sp. & *Tonicella lineata*, typical of Gulf Is. marine parks, B.C.)
- Chlordane
J 32(11): 2205 (levels in blubber of various whales & dolphins)

- Chloride (see Lakes, saline; Salinity; Salt (common))
- Chlorinated biphenyls (see Polychlorinated biphenyls)
- Chlorinated hydrocarbons (see Hydrocarbons, halogenated)
- Chlorinated phenols (see Chlorobiphenylols; Phenols)
- Chlorinated phenyls (see Polychlorinated biphenyls; Perchloro derivatives)
- Chlorine and derivatives (see also the six preceding headings; Hydrocarbons, halogenated (and other subjects in that heading); Organochlorine derivatives)
- J 32(2): 297 (inhibition of FFA formation in Atl. cod liver oil with commercial Na hypochlorite solution (Javex))
- (4): 523 (chlorinated water as disinfectant against infectious pancreatic necrosis virus)
- (12): 2495 (toxicity of residual chlorine in power plant cooling waters to 2 copepods)
- (12): 2525 (acute toxicity of chlorine in estuarial waters to various fishes & invertebrates)
- T 561 (estimation & content of chloride in B.C. kelp during growing season)
- S 2021 (automated determination of chloride in fresh water by cation exchange & conductance)
- Chlorobiphenylols
- S 2038 (determination of)
- Chlorophyll (see also Algae; Photosynthesis; Phytoplankton; Plankton; Productivity, primary; Radiation)
- J 32(1): 72 (inhibition of production, from competition for nitrate in a stratified estuary)
- (8): 1283 (re fish summerkill risk prediction in SW Man. prairie ponds)
- T 511 (production monitoring in some SW Man. prairie eutrophic pothole lakes)
- 525 (re primary production in L. Superior, May-Nov. 1973)
- 553 (as index of phytoplankton enhancement & biodegradation of crude oil in a Mackenzie R. delta lake, N.W.T.)
- 559; 560 (production re solar radiation, in lakes of Experimental Lakes Area, NW Ont.)
- S 2054 (re primary production & solar radiation in arctic S Beaufort Sea)
- Chlorophyta (see also Algae; Phytoplankton)
- T 512 (species distribution in some SW Man. prairie pothole lakes)
- 513 (seasonal successions in some NW Ont. lakes following artificial eutrophication)
- 533 (abundance & biomass re experimental cropping of some N.W.T. lakes)
- S 2087 (L-isoleucine effects on L-threonine deaminase activity of *Tetraselmis maculata*)
- 5-Chlorouracil
- J 32(11): 2227 (sublethal effects on carp larvae)
- Choi, Paul Mun Keung
- S 2038 (determining pentachlorophenol & chlorobiphenylols in biological samples)
- Cholesterol (see Sterols)
- Choline derivatives
- J 32(9): 1633 (lecithin biosynthesis by cholinephosphotransferase pathway in rainbow trout liver microsomes)
- (9): 1643 (chloride: content in lumpfish & menhaden meals)
- Chondrococcus* (former genus for *Flexibacter columnaris*) (see Columnaris disease)
- Christensen, Ivar
- J 32(7): 1083 (Norwegian fishery & biological investigations of small whales)
- Christensen, Ole
- J 32(7): 1223 (by-catches of harbor porpoise in salmon driftnets at W Greenland, 1972)
- Christie, William John
- J 32(12): 2584 (review of book on the blackbass in America & overseas)
- Chromatography (GC = gas chromatography) (Note: Additional references to this subject and to gas-liquid chromatography are under headings referring to their applications, e.g. Acids, fatty; Analysis methods (chemical); Apparatus; etc.)
- J 32(2): 292 (trace analysis of phenols in water by GC)
- (4): 457 (of phenols from aryl phosphate ester lubricants by GC)
- Chromium derivatives
- J 32(9): 1643 (in lumpfish & menhaden meals)
- T 487 (fish toxicity of, as drilling fluids component)
- 488 (literature review of mine effluent effects on aquatic ecosystems)
- 489 (literature review of effects of, from Canadian textile industry effluents, on aquatic organisms)
- 509 (variation of amount in B.C. kelp during growing season)
- 555 (comparison of methods of determining in fresh water)
- 556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Chroomonas* (see Cryptophyceae)
- Chrysophyta (see also Algae; Diatoms)
- T 512 (species distribution in some SW Man. prairie pothole lakes)
- 513 (seasonal succession in some NW Ont. lakes after artificial eutrophication)
- 533 (abundance & biomass re experimental cropping of some N.W.T. lakes)

- Chthamalus* (see Barnacles)
- Chub, bluehead (*Nocomis leptoccephalus*)
J 32(4): 485 (temperatures selected & avoided at various acclimation temperatures (addendum on J 32(8): 1505))
- Chub, lake (*Couesius plumbeus*)
J 32(11): 1989 (in Great Bear R. headwaters, N.W.T.)
T 547 (taken at highway crossing of a Mackenzie R. tributary, N.W.T.)
- Chub, peamouth (see Peamouth)
- Church, Donald Wesley
T 499 (automatic monitor for detecting & recording passage of transmitter-fitted fish)
- Churchill River, Sask. and Man.
J 32(1): 101, 106, 196 (ecological impact of hydroelectric developments)
- Churchill River and Falls, Labrador
J 32(1): 117, 196 (preliminary assessment of environmental impact of hydroelectric project)
- Circulation (of blood) (see Blood, Gills; Respiration; Vasculature)
- Circulation (of waters) (see Currents; Flow; Oceanography; Tides; Upwelling)
- Cirripedia (see Barnacles)
- Citharichthys sordidus* (see Sanddab, mottled)
- Cladocera
J 32(2): 219 (arctic *Daphnia middendorffiana* feeding rate factors)
(3): 341 (population dynamics of limnetic *Ceriodaphnia quadrangula*, *D. ambigua*, & *Bosmina longirostris* in a beaver pond)
(3): 389 (midsummer zooplanktonic communities of many species (not separately indexed) in 49 industrially acid-stressed Ont. lakes)
(4): 461 (life history & abundance of *Alona costata* & *Alonella acutirostris* not previously recorded in L. Superior, also of other cladocerans)
(9): 1589 (effects of goldfish predation on *D. pulex* of a small saline lake)
T 533 (*B. longirostris* most abundant, in some experimentally cropped N.W.T. lakes)
- Claeys, Robert R.
J 32(12): 2391 (Hg, Me-Hg, Cd, & chlorinated hydrocarbon residues in California sea lion)
- Claggett, Freddie Gene
B 189(F) (fish processing plant wastewater treatment (French edition of 1974 English edition))
- Clam, bar (*Spisula solidissima*)
J 32(4): 541 (*Vibrio parahaemolyticus* pathogen found in only 1 of 101 samples, & none in processed meats, of Canadian Atl. coast)
- Clam, butter (*Saxidomus giganteus*)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Clam, coot (*Mulinia lateralis*)
J 32(10): 1870 (effects of brief temperature increases on growth & mortality of larval)
- Clam, horse (*Tresus* sp.)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Clam, little transennella (*Transennella tantilla*)
J 32(9): 1637 (mortality of immature when left buried in sediment after clam digging)
- Clam, Manila littleneck (*Venerupis japonica*) (Japanese littleneck clam)
J 32(6): 813 (boron content)
(9): 1637 (mortality of immature when left buried in sediment after clam digging)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Clam, Pacific littleneck (*Protothaca staminea*) (*Paphia* or *Venerupis staminea*)
J 32(6): 813 (boron content)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Clam, steamer (*Mya arenaria*)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Clams, freshwater
J 32(8): 1297 (uptake of Hg derivatives by *Lampsilis radiata*, *Lasmigona complanata*, & *Anodonta grandis* & distribution in their tissues)
(8): 1455 (comparative toxicity of a larval lampricide to *Sphaerium* sp., *Pisidium* sp., & *Ligumia* sp.)
T 557 (*Pisidium*, *Sphaerium*, etc., in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
572 (L. Superior)
- Clams, marine
S 2029 (arsenic in unspecified Canadian Atl.)
- Clarke, Redmond McVitty
T 488 (literature review of effects of metal mine effluents on Canadian aquatic ecosystems)
- Classification (see also Identification; Keys; Nomenclature; Speciation; Species, new; Systematics; Taxonomy)
J 32(6): 821 (proposed, for fishes by reproductive guilds; lists of species (not indexed separately in this index; corrections to names on J 32(8):

- 1505) of Canadian & European fishes in each classification, with illustrations of embryonic development)
(9): 1663 (terminology of intervals & stages in fish development)
- Cliff, David Dutton
T 516 (marine phytoplankton of 2 SE B.C. coastal sounds)
- Clifford, Charles Hovey
J 32(9): 1607 (respiration & chemical composition of red crab re energetics)
- Climate (see also Ice; Season effects; Snow; Temperature, biological effects; Winterkill)
S 2028 (control of brachiopods, as evidenced by fossils)
- Clingfish, northern (*Gobiosox maeandricus*)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Clinocardium* (see Cockle)
- Clinoptilolite (see Ammonia)
- Clione* (see Pteropoda)
- Clupea harengus harengus* (see Herring, Atlantic)
harengus pallasi (see Herring, Pacific)
- Coastal zone (marine) (see also International commissions; International Law of the Sea; Oceanography headings)
J 32(9): 1671 (review of book on freedom of oceanic research re Law of the Sea)
(10): 1887 (re science for Canada's sea-shelf fisheries)
(12): 2569 (international joint ventures in fishing & 200-mile economic zones)
- Cobalt derivatives
T 509 (variation of amount in B.C. kelp during growing season)
555 (comparison of methods for determining in fresh water)
556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
S 2086 (in phytoplankton & 2 zooplankton species, St. Margaret's Bay, N.S.)
A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Coccidia (see Sporozoa)
- Cochito (*Phocoena sinus*)
J 32(7): 938 (brief overview), 956 (distribution)
- Cockle (*Clinocardium nuttallii*)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Cockscomb, high (?) (*Anoplarchus purpureus* (?)) (blenny eel)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Cod, Atlantic (*Gadus morhua*)
J 32(2): 297 (inhibition of FFA formation in liver by hypochlorite)
(6): 775 (protein instability in minced flesh during storage at -5 C)
(9): 1595 (superchilling temperature re deteriorative changes in stored postrigor muscle & fillets)
(9): 1613 (role of stock biomass & temperature in recruitment of, S Gulf of St. Lawrence)
(9): 1629 (solubilization of myofibrillar proteins by sodium pyruvate during frozen storage)
(11): 2061 (activation energy of aspartate transcarbamylase from ovary)
(12): 2333 (review of seasonal & environmental influences on various attributes of fillet texture, flavor, appearance, & taste, from NE Atl.)
CHN 50 (separation of bones & minced flesh from headed & gutted, or filleted frames)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
526 (current status of stocks & recent annual catches, in ICNAF areas)
S 2012 (American lobster olfactory responses to extracts of muscle fractions)
2018 (malic enzymes in spermatozoa)
2029 (arsenic in muscle)
2032 (gillnet catches re trawling noise)
2038 (pentachlorophenol in N.B.)
- Cod, Pacific (*Gadus macrocephalus*)
T 497 (catches during groundfish survey, Queen Charlotte Sound area, B.C., Sept. 1974)
542 (catches & effort in B.C. commercial groundfish fishery: 1974 data record)
575 (composition & yield of deboned flesh from filleted frames)
- Coelenterata (see Medusae)
- Cold storage (see Refrigeration)
- Coleoptera
T 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
- Collagen (see Bone)
- Collins, Curtis Allan
J 32(2): 253 (merchant ship observations of sea-surface temperatures near Pac. Ocean Weather Station "P," 1927-33)
- Collins, John Joseph
J 32(3): 402 (pink salmon occurrence in L. Huron)

- Collins, M. T.
J 32(11): 2025 (nitrification in an aquatic recirculating system)
(11): 2033 (parasiticide effects on nitrification in an aquatic recirculating system)
- Collisella* (see Limpets)
- Color (see also Pigments)
CHN 55 (fish oils in feeds to enhance pink, in flesh of salmonids)
T 484 (instrumental vs. visual sorting of, for raw Pac. salmon flesh & after canning)
559 (of water: data for lakes of Experimental Lakes Area, NW Ont.)
- Columaris disease
J 32(9): 1553 (water temperature re *Flexibacter columaris* infection in steelhead trout, coho & chinook salmon)
- Come-by-Chance Bay, Nfld.
T 485 (estimation of hydrocarbon concentrations in sediments)
- Communities (see also Schools)
J 32(3): 389 (midsummer crustacean zooplankton in acid-stressed lakes)
(8): 1409 (summer distribution of nearshore fish near a L. Ontario nuclear generating station thermal plume)
(9): 1657 (benthic, re structure of marine ecosystems)
(11): 2285 (re ecology (book review))
(12): 2530 (crustacean plankton, & their variation with predation, Matamek R. system, Que.)
S 2075 (production in marine planktonic)
- Complexation; Binding agents; Chelation (see also Flotation agents)
J 32(10): 1755 (heavy-metal binding components of river waters near Ottawa, Ont.)
- Composition, biological (see Classification; Communities; Schools)
- Composition, chemical (including proximate analysis) (see also Acids, fatty; Analysis methods (chemical); Limnology; Nutrients, aquatic; Oceanography; Oils, fatty, and fats; Pollution; etc.; also names of chemical elements and types of compounds; names of organisms)
J 32(4): 507 (Nfld. & Labrador capelin, 1972-73)
(5): 615 (seasonal effects on Atl. coast eelgrass)
(6): 747 (Icelandic blue whiting & cod)
(9): 1607 (red crab, re respiration & energetics)
(9): 1643 (lumpfish & menhaden meals)
(11): 1971 (chemical characteristics of Great Bear L., N.W.T.)
T 498 (feathers: chemical elements, mainly metallic)
509; 561; 568 (kelp (*Nereocystis luetkeana*))
531 (Atl. sea cucumber meal)
546; 556(1); 556(2) (sediments of waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
575 (proximate, of deboned flesh recovered from various B.C. underutilized marine fishes)
S 2086 (mineral & biochemical, of phytoplankton, *Calanus finmarchicus* & *Sagitta elegans*, St. Margaret's Bay, N.S.)
2089 (white barracudina lipids, wax esters, & fish protein concentrate)
A 323 (& nutritive value of American lobster meat)
- Computer programming (see also Mathematical treatment of data)
T 493 (for evaluating second-order experimental designs for data on effects of environmental factors on biological phenomena)
498 (for analysis of feathers for chemical elements)
499 (for reading monitor tapes detecting & recording passage of transmitter-fitted fish in rivers or channels)
- Comstock, V. M.
J 32(10): 1849 (apparatus for continuously saturating water with hydrophobic organic chemicals)
- Condition
T 500 (index, of blue mussel cage-reared in 2 N.S. embayments)
- Conditioned response (see Learning)
- Conditioning (see Adaptation)
- Conductivity, electrical
T 517 (electronic system for continual monitoring of, in water of experimental tanks)
547; 556(1) (of waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
564 (of waters of Carnation Creek, Vancouver Is., B.C.)
- Conference (see also Symposium)
J 32(7): entire issue (biology & fisheries for smaller cetaceans — proceedings & papers of meeting of Subcommittee on Small Cetaceans, International Whaling Commission, Montreal, April 1-11, 1974)
- Connor, James Thomas Hamilton
J 32(1): 61 (biosynthetic pathways of glycerol phosphate incorporation into rainbow trout hepatic lipids)
- Connors, Shelagh Ann
T 482 (bibliography of Canadian Atl. coast estuary studies)
- Conover, Robert James
S 2044 (*Clione limacina* mollusc assimilation, metabolism, & growth efficiency)
2075 (production in marine planktonic communities)
- Conservation (see Coastal zone; Ecology; Environment;

- Exploitation; International commissions; Law; Management; Pollution; Regulations; etc.)
- Continental shelf (*see also* Coastal zone; Georges Bank; International Law of the Sea; Grand Bank; Queen Charlotte Sound; Scotian Shelf)
 J 32(10): 1887 (re science for Canada's shelf-seas fisheries)
 (12): 2569 (international joint ventures in fishing & 200-mile economic zones)
- Cook, David Greenfield
 T 572 (L. Superior benthic macroinvertebrates)
- Copepoda (*see also* Calanoida; Caligoida; Cyclopoida; *also* Crustacea; Parasites; Plankton; Zooplankton)
 J 32(4): 461 (life history & abundance of various species (not separately indexed) in L. Superior outlet)
 T 533 (of some experimentally cropped N.W.T. lakes)
 557 (of waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- Copper derivatives
 J 32(1): 78 (levels in plasma of spawning migratory sockeye salmon)
 (4): 533 (corticosteroid concentrations in sockeye salmon exposed to low concentrations of CuSO_4)
 (9): 1643 (in lumpfish & menhaden meals)
 (10): 1755 (re heavy-metal binding components of river waters near Ottawa, Ont.)
 (11): 2055 (chemoreceptory response of American lobster in presence of)
 T 488 (literature review of mine effluents effects on aquatic ecosystems)
 489 (literature review of Canadian textile industry effluents effects on aquatic organisms)
 498 (analysis for, in feathers)
 506 (distribution in submerged mine tailings plume in Rupert & Holberg inlets, B.C.)
 509 (variation of amount in B.C. kelp during growing season)
 531 (in Atl. sea cucumber meal)
 555 (comparison of methods for determining in fresh water)
 556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
 564 (in waters of Carnation Creek, Vancouver Is., B.C.)
 573 (factors affecting acute toxicity of CuSO_4 to rainbow trout)
 S 2017 (in yellow perch, white & smallmouth bass, L. Erie)
 2086 (in phytoplankton & 2 zooplankton species, St. Margaret's Bay, N.S.)
 A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Cordgrass, marsh (*Spartina alterniflora*)
 J 32(1): 83 (above-ground production near N end of its range (N.S.))
- Coregonus clupeaformis* (*see* Whitefish, lake)
- Cormorant, double-breasted (*Phalacrocorax auritus*)
 S 2038 (pentachlorophenol in eggs, N.B.)
- Cornick, John Walter
 J 32(5): 702 (red & snow crab resistance to gaffkemia infection)
- Corophidium* (*see* Amphipoda)
- Corrections (*Note:* These references, but not the actual corrections, are shown after the affected entries under author and subject headings that occur in this present J 32 volume index)
 J 32(8): 1505 (to articles J 21(5): 891; 31(5): 521; 31(9): 1467; 32(2): 310; 32(2): 316 (French abstract); 32(4): 485 (addendum); 32(5): 706; 32(6): 821)
- Corticosteroids (*see also* Hormones)
 J 32(4): 533 (concentration in sockeye salmon exposed to cupric concentrations)
 A 324 (effects of metal derivatives on functions (review))
- Cortisol; Cortisones (*see* Corticosteroids; Hormones)
- Corynebacterium* (*see* Bacteria)
- Cottus aleuticus* (*see* Sculpin, coastrange)
asper (*see* Sculpin, prickly)
sp. (*see* J 32(1): 21 reference under Speciation)
- Couesius plumbeus* (*see* Chub, lake)
- Counting (*see also* Census; Distribution; Populations; Sounding, echo)
 S 2064 (analysis of fish count data from a digital echo-counting system)
 A 326 (a computerized echo-counting system for demersal fish)
- Coustalin, Jean-Baptiste
 T 468 (zonation of intertidal biomass & related benthic data from 2 banks off Fraser R. estuary, B.C.)
- Cover (*see also* Habitat; Light, reactions to)
 J 32(5): 667 (re winter ecology of young coho salmon & steelhead trout in a creek)
 (9): 1652 (shade selection re water depth, by brook trout & young Atl. salmon)
- Covey, Jane Frances
 J 32(8): 1431 (cholesterol requirements of young American lobster)
- Crab, Dungeness (*Cancer magister*)
 J 32(10): 1880 (improved flowing water apparatus for larvae culture)

- T 542 (catches in B.C. commercial trawl fishery: 1974 data record)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Crab, kelp (*Pugettia producta*) (see also Crab, spider kelp)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Crab, king (*Paralithodes camtschaticus*)
T 542 (catches in B.C. commercial groundfish fishery: 1974 data record)
- Crab, porcelain (*Petrolisthes eriomerus*)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Crab, queen (see Crab, snow)
- Crab, red (*Geryon quinquedens*)
J 32(5): 702 (resistance to lobster disease (gaffkemia) pathogen)
S 2046 (hepatopancreas extract in vitro hydroxylation of biphenyl component of PCB)
- Crab, red (*Pleuroncodes planipes*)
J 32(9): 1607 (respiration & chemical composition re energetics in an upwelling system)
- Crab, rock (*Cancer irroratus*)
J 32(12): 2515 (modified lobster traps for catching, to exclusion of lobsters)
CHN 49 (processing of cooked, by meat separators; yields of meat)
S 2046 (as for Crab, red (*Geryon*), above)
- Crab, shore (*Carcinus maenas*)
J 32(8): 1339 (feed vs. sea water re uptake & accumulation of ⁶⁵Zn)
S 2016(F) (uptake & accumulation of ferric Fe in gills)
- Crab, shore (*Hemigrapsus* sp.)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Crab, snow (*Chionoecetes opilio*) (queen crab; spider crab)
J 32(4): 541 (*Vibrio parahaemolyticus* pathogen found in only 1 of 18 samples of live, weak, or dead, & none in 28 samples of processed flesh, from Canadian Atl. coast)
(5): 702 (resistance to lobster disease (gaffkemia) pathogen)
(6): 761 (photographing, censusing, & calibration of effective area fished per trap)
- Crab, spider (see Crab, snow)
- Crab, spider kelp (*Pugettia gracilis*)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Crab, tanner (*Chionoecetes bairdi*)
- T 542 (catches in B.C. commercial groundfish fishery: 1974 data record)
- Crabs
J 32(10): 1880 (improved flowing water apparatus for culture of larval brachyuran)
(12): 2515 (modified lobster traps for catching, to exclusion of lobsters)
- Craig, Peter C.
J 32(5): 689 (Arctic grayling & young Arctic char movements & growth in a small arctic Alaskan stream)
- Crappie, black (*Pomoxis nigromaculatus*)
J 32(10): 1799 (production in a new S Carolina impoundment)
- Crassostrea gigas* (see Oyster, Pacific)
virginica (see Oyster, Atlantic)
- Crayfish
J 32(8): 1455 (toxicity of a larval lampricide to freshwater *Orconectes propinquus*)
(12): 2433 (*Pacifastacus leniusculus* growth in subalpine L. Tahoe, Calif.)
- Crepidostomum* (see Trematoda)
- Cresols (see Phenols)
- Cressman, Douglas
J 32(2): 307 (Atl. salmon taken in sea in N Labrador)
- Cripe, Claude R.
J 32(10): 1884 (quantitative determination apparatus for registering locomotor activity patterns of aquatic organisms, using infrared light)
- Cripe, Jesse H.
J 32(10): 1884 (as above for Cripe, C. R.)
- Cropping
T 533 (experimental, of N.W.T. lakes: phytoplankton & zooplankton)
- Crum, Glen Harry
T 552 (effects of Norman Wells crude oil on periphyton of selected N.W.T. lakes & rivers)
- Crustacea (see also taxonomic subdivisions of; also Benthos; Invertebrates; Zooplankton)
J 32(3): 389 (midsummer zooplanktonic communities in acid-stressed lakes)
(4): 461 (life history & abundance of zooplanktonic in L. Superior outlet)
(12): 2530 (crustacean plankton communities & their variation with predation, Matamek R. system, Que.)
T 547; 557 (of waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)

Cryptacanthodes maculatus (see Wrymouth)

Cryptomonads (see Cryptophyceae)

Cryptophyceae

- T 512 (species distribution in some SW Man. prairie pothole lakes)
 513 (seasonal successions in some NW Ont. lakes after artificial eutrophication)
 533 (abundance & biomass re experimental cropping of some N.W.T. lakes)
 S 2067 (isolation of a new carotenoid pigment, manixanthin, from *Chroomonas salina*)
 2068 (wax ester production from *C. salina*)
 2087 (L-isoleucine effects on L-threonine deaminase activity of *C. salina* & *Hemiselmis virescens*)

Cucumaria frondosa (see Sea cucumber)

miniata (see Sea cucumber, burrowing)

Culex (see Mosquito)

Culicidae (see also Mosquito)

- T 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)

Culp, Larry Robert

- T 525 (chlorophyll & primary production, L. Superior, May-Nov. 1973)

Culture (see also Aquaculture; Bacteria; Diet; Feed; Hatchery; Pen, fish; Ponds; Propagation)

- J 32(6): 739 (American oyster in laboratory: types of bacteria isolated in sea water used in)
 (10): 1880 (improved flowing water apparatus for larval crab)
 T 500 (blue mussel, for studying growth, etc., in cages)
 501 (effects of reduced winter rations on growth, etc., of young coho salmon)
 S 2066 (of pan-size sockeye & pink salmon, using experimental control)

Cumacea (see also Invertebrates)

- S 2055 (of arctic S Beaufort Sea zoobenthos)

Cunner (*Tautoglabrus adspersus*)

- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)

Currents (water) (see Flow; Hydrodynamics; Tides; also next heading)

Currents, reaction of organisms to (see also Flow; Hydroelectric projects; Tides)

- J 32(2): 303 (buoyancy adjustment of tadpole madtom & black bullhead in response to water velocity change)
 (5): 633 (re chum salmon & rainbow trout spawning behavior in a laboratory flume)
 (5): 667 (re aspects of winter ecology of young coho salmon & steelhead trout)

Cusk (*Brosme brosme*)

- T 526 30 (incidental to groundfish fishery in ICNAF areas)

Cuthbert, Robert Major

- T 484 (instrumental color sorting of raw salmon in preparation for canning)

Cyanide

- T 488 (literature review of effects of ore treatment, on aquatic ecosystems)

Cyanophyta

- J 32(8): 1283 (*Aphanizomenon floss-aquae* re summer-kill of fish in SW Man. prairie pothole lakes)
 T 512 (species distribution in some SW Man. prairie pothole lakes)
 513 (seasonal successions in some NW Ont. lakes following artificial eutrophication)
 533 (abundance & biomass re experimental cropping of some N.W.T. lakes)
 S 2087 (L-isoleucine effects on L-threonine deaminase activity of *Agmanellum quadruplicatum* & *Anacystis marina*)

Cyclopoida

- J 32(4): 461 (life history & abundance of *Cyclops strenuus* not previously recorded in L. Superior, also of *Mesocyclops edax*)
 (12): 2495 (toxicity to *C. bicuspidatus thomasi* of residual chlorine in power plant cooling waters)

Cyclops (see Cyclopoida)

Cyclopterus lumpus (see Lumpfish)

Cyprinus carpio (see Carp)

Cystophora cristata (see Seal, hooded)

Cytogenetics (see Genetics)

Cytology (see also Disease; Eggs; Genetics; Histology)

- J 32(1): 11 (pituitary gland, of thiourea-treated sexually mature male sockeye salmon)
 (2): 295 (cytotaxonomy & cytogenetics of inconnu re lake whitefish)
 (4): 554 (of steelhead trout re toxicity of kanamycin antibiotic)
 (10): 1767 (mantle cells of quahog clams exposed to HgCl₂)
 S 2060 (Pac. halibut egg development)
 2073 (effect of HgCl₂ on cellular morphology & acid phosphatase of tissue spinner cells)

Cytotella (see Diatoms)

D

Dace, longnose (*Rhinichthys cataractae*)
T 547 (taken at highway crossing of a Mackenzie R. tributary, N.W.T.)

Dadswell, Michael John
J 32(12): 2535 (small-boat otter trawl for limnological collecting)

Dagbjartsson, Björn
J 32(6): 747 (utilization of blue whiting for human food)

Dale, Jacqueline
S 2065 (fluorescent spectroscopic estimates of present petroleum hydrocarbon contamination in NW Atl. Ocean)

Dams (see also Hydroelectric projects; Reservoirs)
J 32(1): 98, 101, 106, 117, 126, 136, 161, 171, 177, 196 (for hydroelectric projects in Canada: hindsight & foresight re environmental impact assessment)
(1): 126 (possible effects of proposed Moran Dam on salmon of Fraser R. system, B.C.)
(1): 171, 196 (impact of Bennett Dam (B.C.) on Peace & Athabaska rivers delta (Alta.) & on L. Athabaska (Alta. & Sask.))
(1): 196 (table of details of some 90 reservoirs for power development, etc., in Canada)

Daniel, Clara B.
J 32(11): 2197 (dieldrin effects on young channel catfish growth)

Daniel, Joseph Carl, Jr.
J 32(1): 65 (progesterone concentrations during northern fur seal early pregnancy)

Daphnia (see Cladocera)

Darrow, Donna Colleen
J 32(2): 310 (DDT residues in euphausiids in Gulf of St. Lawrence upper estuary (additional reference on J 32(8): 1505))
(10): 1845 (DDT accumulation by some cultured marine *Calanus* spp. & apparent lack of its metabolism by them)

Davenport, Douglas
T 497 (Pac. ocean perch biomass, underutilized groundfish species sampling, & bottom water temperature monitoring, Queen Charlotte Sound & Hecate Strait, B.C., Sept. 1974)

Davis, John Christopher
J 32(3): 411 (Na pentachlorophenate & dehydroabiatic acid as reference toxicants for salmonid assays)
(12): 2295 (review of minimal dissolved oxygen requirements & tolerance of Canadian aquatic life)

T 464 (as for J 32(3): 411 above)

Dawe, Donald Lewis
J 32(11): 2025 (nitrification in an aquatic recirculating system)
(11): 2033 (parasiticide effects on nitrification in an aqueous recirculating system)

DDT; DDD, DDE
J 32(2): 310 (residues in euphausiids in Gulf of St. Lawrence upper estuary (correction on J 32(8): 1505))
(5): 661 (effect on rainbow trout learning a simple conditioned response)
(6): 785 (effect on rainbow trout discrimination of light intensity)
(10): 1845 (accumulation of DDT by some cultured marine *Calanus* spp. & apparent lack of its metabolism by them)
(10): 1852 (mathematical model for appraising uptake & retention, from age, length, & weight of fish)
(11): 2111 (in Canadian arctic & subarctic marine food chains)
(11): 2205 (levels in blubber of various whales & dolphins)
S 2017 (residues in yellow perch, white & smallmouth bass, L. Erie (Ont.))
2048 (residue levels in ringed seal blubber, Canadian arctic)

Deaminases (see Enzymes)

Deboning, of fish (see Bone; Flesh)

Decapoda (see also Crab; Crabs; Crayfish; Crustacea; Lobster; Shrimp; Shrimps; Zooplankton)
S 2036 (the Y-organ vs. molting gland problem)

Decay (see also Biodegradation)
J 32(5): 615 (seasonal effects on chemistry of Atl. coast eelgrass)

Decomposition (see Biodegradation; Decay)

DeFoe, David L.
J 32(4): 544 (toxicant injection system for flow-through bioassays)

Deformities (see Malformation)

Degradation (see also Biodegradation; Enzymes)
T 486 (of Imol aryl phosphate ester lubricant through gradual natural hydrolysis reduces its fish toxicity)
S 2037 (enzymic, of American lobster tail muscle nucleotides)

Dehydroabiatic acid (see Acids, resinic)

Delicatessen
T 574 (pilot plant application of processing improved)

- formulated breaded product from flesh of mechanically deboned freshwater fish (e.g. white sucker), & judging of quality by taste panel)
- Delphinapterus leucas* (see Whale, white)
- Delphinus delphis* (see Dolphin, common)
- Denbigh, Alastair
MSP 26 (drawings for folder on seashore animal life of Gulf Is., B.C.)
- Dendraster excentricus* (see Sand dollars)
- Denman, Kenneth Leslie
T 523 (mathematical representation & prediction of phytoplankton productivity)
539 (summary of spectral analysis & techniques)
- Density (hydrographic) (for routine determinations not indexed separately; see Limnology; Oceanography)
J 32(9): 1561 (annual & longer term variations in S B.C. coastal deep-waters)
(10): 1693 (seasonal variations in an Alaskan inlet with tidewater glaciers)
T 524 (structure of shelf & Georges Bank waters off N.S.)
- Density (of numbers of organisms) (see Census; Communities; Counting; Populations; Schools; Sounding, echo)
- Dentry, W. Joan
T 546; 556(1); 556(2) (chemistry, mineralogy, & transport rates of sediments in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
- Depth (see also Limnology; Oceanography; Pressure, hydrostatic; Swimbladder; Swimming)
J 32(5): 667 (of water re aspects of winter ecology of young coho salmon & steelhead trout in a creek)
(9): 1652 (brook trout & young Atl. salmon selection of shade re water depth)
T 496; 503 (distribution of Pac. herring & some other fishes, during B.C. herring surveys offshore SW Vancouver Is., 1972 & 1973; Juan de Fuca Strait, 1971)
- Desai, Indrajit Dayalji
S 2087 (L-threonine deaminase feedback effects in a marine diatom & a cryptomonad)
- Desautels, Denise
J 32(4): 523 (survival & destruction of infectious pancreatic necrosis (IPN) virus)
(8): 1267 (survival & inactivation of IPN virus)
- Desiccation
J 32(4): 523 (effect on infectious pancreatic necrosis virus)
- Detergents
T 489 (effects of, from Canadian textile industry effluents, on aquatic organisms (review))
- Detoxification (see Toxicants)
- Detritus
J 32(10): 1799 (significance of, to fish production in a new impoundment)
S 2045 (bacteria associated with seaweed re role in detrital feed chain)
- Development (cultural) (see also Environment; Pollution; Research and Development; Resources)
J 32(9): 1519 (simple prediction of capacity of a lake for, based on lake trophic status)
- Development (physiological) (see also Growth; Maturity)
J 32(3): 341 (re population dynamics of embryonic limnetic cladocerans in a beaver pond)
(3): 397 (embryonic, of rainbow trout re light intensity & temperature)
(4): 493 (effect of temperature on rainbow trout, in acid waters)
(5): 609 (toxaphene insecticide effects on brook trout embryos)
(6): 821 (descriptions & illustrations of embryonic, re proposed classification of fishes by reproductive guilds; exemplified by Canadian & European species (not separately indexed in this index; corrections on J 32(8): 1505))
(9): 1663 (terminology of intervals & stages in fish)
CNG 100 (egg to adult stages of Pac. herring in B.C. waters)
T 527; 528; 529; 530 (effects of hydroelectric projects on lake whitefish; northern pike; yellow walleye; lake trout (literature reviews & bibliographies))
S 2007 (temperature & salinity effects on larval garfish)
2060 (laboratory observations on early, of Pac. halibut)
- DeWolf, A. Gordon
B 187(F) (N.B., N.S., & P.E.I. lobster fishery: economic effects of regulations (French edition of 1974 English edition))
- Dexter, Roger
J 32(8): 1437 (possible viral interference in isolation of IPN virus from carrier fish)
- Diaptomus* (see Calanoida)
- Diatoms (Bacillariophyta; Diatomeae) (see also Algae; Phytoplankton)
J 32(12): 2413 (seasonal succession of *Tabellaria fenestrata* re primary production in Babine L., B.C.)
T 512 (species distribution in some SW Man. prairie pothole lakes)
513 (seasonal successions in some NW Ont. lakes after artificial eutrophication)

- 516 (species & distribution in 2 B.C. inlets)
 533 (abundance & biomass re experimental cropping of some N.W.T. lakes)
 552 (effects of crude petroleum oil on, in selected N.W.T. lakes & rivers)
 S 2074 (re effect of experimental crude oil spill on 2 Mackenzie R. delta lakes, N.W.T.)
 2087 L-isoleucine effects on L-threonine deaminase activity of *Cyclotella nana*)
- Diaz, Robert James
 J 32(10): 1870 (effects of brief temperature increases on larval coot clam)
 (12): 2525 (acute toxicity of chlorine in estuarial waters to various species)
- Dickson, Ian William
 J 32(1): 106 (Nelson R. system hydroelectric development in N Man.)
- Dickson, Kenneth Lynn
 J 32(4): 485 (temperature preferences of fish at various acclimation temperatures (addendum on J 32(8): 1505))
- Diel habits and cycles (see also Light, reactions to; Moonlight; Temperature, biological effects)
 J 32(2): 219 (re *Daphnia* feeding rate)
 (3): 347 (effects on zooplankton sample variability in a nearshore marine environment)
 (5): 633 (of chum salmon & rainbow trout spawning in a laboratory flume)
 (12): 2479 (daily pattern of nitrogen excretion & oxygen consumption by young sockeye salmon under controlled conditions)
- Diet (see also Aquaculture; Culture; Feed; Feedstuff; Hatchery; Predation)
 J 32(3): 422 (amino acid supplementation of casein in, for Atl. salmon fry; also of soybean meal in, for rainbow trout fingerlings)
 (5): 587 (fatty acids of gut contents as tracers of trophic relations & feed of young Atl. menhaden in estuaries)
 (10): 1813 (NaCl effect on Atl. salmon growth)
 (11): 2103 (young sockeye salmon growth rate re fish size & ration level)
 (11): 2197 (young channel catfish growth as affected by dieldrin in)
 (11): 2005, 2015 (oral, etc., administration of mercury compounds re effect on young rainbow trout)
- T 531 (Atl. sea cucumber meal as possible substitute for Atl. herring meal for trout)
 538 (effects of commercial vs. homemade fish scrap pellets on rainbow trout growth in salt water, Passamaquoddy Bay, N.B.)
 S 2033 (chopped Atl. salmon as component for Atl. salmon culture)
 2071 (fishery products re patients with Refsum's syndrome)
- Diffusion (of waters)
 S 2085 (some features of turbulent, from a continuous source at sea)
- Digenea (see Trematoda)
- Digestion (see also Bioenergetics; Feed; Intestine; Metabolism)
 J 32(5): 587 (fatty acid composition of young Atl. menhaden gut contents as tracers of estuarine diet)
 S 2044 (assimilation & metabolism of *Clione limacina* pteropod)
- Dillon, Peter James
 J 32(9): 1519 (predicting development capacity of a lake from lake trophic status)
 (10): 1934 (review of book on coupling of land & water systems)
- Dingle, John Reginald
 J 32(6): 775 (protein instability in frozen-stored minced flesh of several commercial Canadian Atl. marine fishes)
 S 2037 (enzymic reactions of adenine derivatives in lobster tail muscle)
 A 328 (functional & nutritive food proteins from fish)
- Dinophyceae (see Peridineeae)
- Dieldrin (see also Pesticides)
 J 32(10): 1705 (uptake compared with that of Aroclor PCB, by white sucker)
 (10): 1852 (mathematical model for appraising uptake & retention, from age, length, & weight of fish)
 (11): 2197 (uptake from diet & effect on growth of young channel catfish)
 (11): 2205 (levels in blubber of various whales & dolphins)
 S 2042 (Chironomids as indicators of effects of, on macroinvertebrate diversity in a pond)
- Diptera (see also taxonomic divisions of; also Insecta; Mosquito)
 J 32(8): 1455 (toxicity of a larval lampricide to blackfly larvae (*Simulium pugetense*) & 2 other species)
 (9): 1589 (goldfish predation on *Chaoborus americanus* of a small saline lake)
- Discocotyle (see Trematoda)
- Discrimination (see also Chemoreception; Feed; Size)
 J 32(5): 661; 6: 785 (DDT effects on rainbow trout ability)
 (9): 1589 (of goldfish predation on zooplankton of a small saline lake)
- Disease (see also Bacteria; Ceratomyxosis; Columnaris disease; Fungus; Parasites; Pathogens; Redmouth disease; Refsum's syndrome; Viruses; for channel catfish virus disease see Viruses; for gaffkemia see Lobster pathogen; for infectious pancreatic necrosis see Viruses)

- J 32(1): 92 (a viral & a bacterial kidney disease (BKD) appearing concurrently in 2 trout species)
 (2): 325 (review of book on fish diseases)
 (7): 1073 (types of, in Franciscana dolphins)
 (8): 1465 (of fish & aquatic invertebrates, as investigated by FRBC (summary))
 (8): 1499 (review of book of color atlas of diseases of fishes, amphibians, & reptiles)
 (9): 1674 (review of book on fish immunology)
 (11): 2224 (fluorescent antibody identification & detection of BKD bacterium)
 A 327 (review of book on diseases & parasites of fishes & aquatic invertebrates)
- Disinfectants (*see also* Antimicrobial agents; Fungicide)
 J 32(4): 523 (chlorine or iodophor, for infectious pancreatic necrosis virus)
- Dispersants (for oil spills on waters)
 S 2014 (effect on biodegradation & growth of bacteria on crude oil)
- Distribution (*see also* Age; Length; Marking; Migration; Movements; Size; Sounding, echo; Species, new records; Tagging; Tracking; for distribution of toxicants, etc. in organisms, *see* names of chemical elements and compounds, organisms, tissues; Toxicants)
 J 32(2): 259 (*Heterotanytarsus* Nearctic & Palaearctic chironomids)
 (3): 367 (*Protanypus* Nearctic & Palaearctic chironomids)
 (7): 945-952 (of most smaller cetacean species by marine regions: arctic; N, tropical, & S Atl.; N, tropical, & S Pac.; Indian Ocean; antarctic)
 (7): 1005 (pygmy right whale, in South African waters)
 (7): 1019 (northern bottlenose whale in NW Atl.)
 (7): 1041 (narwhal in E Canadian waters)
 (7): 1059 (& differentiation of *Stenella* dolphins in E tropical Pac.)
 (8): 1305 (scallop on Georges Bank off N.S.)
 (8): 1409 (of lake nearshore fish community near a nuclear generating station)
 (8): 1442 (hyperiid amphipods off Oregon coast)
 (8): 1465 (of fish stocks as investigated by FRBC (summary))
 (11): 1989 (of fish species re zooplankton, benthic invertebrates, & environmental conditions, Great Bear L., N.W.T.)
 T 496; 503 (Pac. herring, offshore SW Vancouver Is., 1972 & 1973; Juan de Fuca Strait, 1971)
 512 (phytoplankton species, in some SW Man. prairie pothole lakes)
 516 (phytoplankton species in Pendrell & Hotham sounds, B.C.)
 A 324 (metals & derivatives in environment, pollutants, & as result of biological uptake (review))
- Distributions, probability
 S 2062 (comparison of (mathematical))
- Diversion of rivers
- J 32(1): 106 (re hydroelectric development of Nelson R. system, N Man.)
 (1): 117 (re environmental impact of Churchill Falls hydroelectric project (Labrador))
 S 2024 (ecological effects re Garrison Diversion of certain Missouri R. northern tributary waters (USA) into L. Winnipeg via Red & Assiniboine rivers)
- Doepke, Philip P.
 J 32(12): 2541 (first occurrence of brook silverside in a tributary of L. Superior)
- Dog (sledge) (*Canis familiaris*)
 J 32(6): 795 (mercury in, from Holman, N.W.T.)
- Dogfish, spiny (*Squalus acant.*)
 J 32(1): 43 (age & growth in .C. waters)
 (5): 649 (new coccidia sporozoan, *Eimeria squali*, from Pac.)
 T 496; 503 (catches & feed of, during B.C. herring surveys offshore SW Vancouver Is., 1972 & 1973; in Strait of Juan de Fuca, 1971)
 497 (catches during groundfish survey, Queen Charlotte Sound area, B.C., Sept. 1974)
 526 (as potentially greater resource in Atl. coast ICNAF areas)
 542 (catches & effort in B.C. commercial groundfish survey: 1974 data record)
 575 (yield & composition of deboned flesh from headed & gutted B.C.)
- Dolphin, Atlantic hump-backed (*Sousa teuszii*)
 J 32(7): 910 (overview), 947, 951 (distribution)
- Dolphin, Atlantic white-sided (*Lagenorhynchus acutus*)
 J 32(7): 920 (overview), 946 (distribution), 1083, 1163 (Norwegian fishery & biology), 1095 (stranding mortality re population abundance)
- Dolphin, black (*Cephalorhynchus eutropia*)
 J 32(7): 935 (brief overview), 950 (distribution), 1123 (Chilean research)
- Dolphin, bottlenose (*Tursiops truncatus*) (*T. truncatus*)
 J 32(7): 923-925 (overview), 946-949, 951 (distribution), 952 (net fishery), 956-958 (incidental capture in other fisheries), 961, 962 (tagging, radio tracking), 1095 (stranding mortality re population abundance), 1105 (occurrence, history, & catches in Caribbean), 1123 (Chilean research), 1191, 1197, (techniques of live capture for public display)
 (7): 1055 (status & life history aspects in Florida)
 (7): 1155 (former net fisheries in NW Atl.)
 S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Dolphin, Commerson's (*Cephalorhynchus commersonii*)
 J 32(7): 936 (overview), 947 (distribution), 1123 (Chilean research)

Dolphin, common (*Delphinus delphis*)

- J 32(7): 931-932 (overview), 946-949, 951 (distribution), 956 (incidental capture in other fisheries), 961 (marking & tagging), 962 (tracking), 1095 (stranding mortality re population estimate), 1123 (Chilean research), 1197 (live capture for public display, California)
S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)

Dolphin, dusky (*Lagenorhynchus obscurus*)

- J 32(7): 920-921 (overview), 947, 950, 951 (distribution), 956 (incidental capture), 961 (tagging), 1123 (Chilean research)

Dolphin, Fraser's (*Lagenodelphis hosei*)

- J 32(7): 923 (overview), 949 (distribution), 957 (incidental capture)

Dolphin, Heaviside's (*Cephalorhynchus heavisidii*)

- J 32(7): 935 (overview), 947 (distribution), 956 (incidental capture)

Dolphin, Hector's (*Cephalorhynchus hectori*)

- J 32(7): 935 (overview), 951 (distribution)

Dolphin, hourglass (*Lagenorhynchus cruciger*)

- J 32(7): 921 (brief overview), 1123 (Chilean research)

Dolphin, Indo-Pacific hump-backed (*Sousa chinensis*)

- J 32(7): 909 (overview), 949 (distribution)

Dolphin, Irrawaddi (*Orcaella brevirostris*)

- J 32(7): 910 (brief overview), 950 (distribution), 956 (incidental capture)

Dolphin, northern right whale (*Lissodelphis borealis*)

- J 32(7): 933-934 (overview), 948 (distribution), 1197 (live capture for public display)
S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)

Dolphin, Pacific white-sided (*Lagenorhynchus obliquidens*)

- J 32(7): 922-923 (overview), 948 (distribution), 1197 (live capture for public display)

Dolphin, Peale's (*Lagenorhynchus australis*) (Peale's porpoise)

- J 32(7): 921 (brief overview), 950 (distribution), 1123 (Chilean research)

Dolphin, Risso's (*Grampus griseus*)

- J 32(7): 925 (overview), 946, 947, 948, 949 (distribution), 1095 (stranding mortality re population abundance), 1105 (occurrence, history, & catches in Caribbean), 1123 (Chilean research)
S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)

Dolphin, rough-toothed (*Steno bredanensis*)

- J 32(7): 906-907 (overview), 947, 948, 949 (distribution), 957 (incidental capture), 1105 (occurrence, history, & catches in Caribbean)

Dolphin, southern right whale (*Lissodelphis peronii*)

- J 32(7): 932 (brief overview), 950 (distribution), 1123 (Chilean research)

Dolphin, spinner (*Stenella longirostris*)

- J 32(7): 926-928 (overview), 947, 949, 950 (distribution), 956 957 (incidental capture), 961 (marking), 1105 (occurrence, history, & catches in Caribbean)

Dolphin, spotted (see Dolphins, spotted)

Dolphin, striped (*Stenella coeruleoalba*)

- J 32(7): 928-929 (overview), 949 (distribution), 957 (incidental capture), 1095 (stranding mortality re population abundance)
(7): 1069 (ecological aspects, Japan)

Dolphin, white beaked (*Lagenorhynchus albirostris*)

- J 32(7): 919 (overview), 946 (distribution), 1095 (stranding mortality re population abundance)
S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)

Dolphin, white flag (*Lipotes vexillifer*)

- J 32(7): 944 (brief overview)

Dolphins (see also foregoing names of species; also Boutu; Franciscana; Susu, Ganges; Susu, Indus; Tucuxi; Whale, false killer; Whale, killer; Whale, long-finned pilot; Whale, melon-headed; Whale, short-finned pilot; Whale, white; also Dolphins, spotted)

- J 32(7): (an issue on biology & fisheries for smaller cetaceans, including some dolphins having a descriptive name of "whale" as indicated in above heading) (Note: In some places therein there is lack of distinction between dolphins & porpoises)

- (11): 2205 (chlorinated hydrocarbon levels in blubber)

- B 190 (hydrodynamics & energetics of propulsion (not indexed separately in this index; see its indexes))

Dolphins, spotted (*Stenella* spp.)

- J 32(7): 929-931 (overview), 947, 948, 949 (distribution), 957 (incidental catches), 961, 962, 963 (marking, tagging, tracking), 967 (*S. attenuata*, *S. dubia*, *S. frontalis*, *S. plagiodon* uncertain speciation; see Note 11 to list on that page); 1105 (occurrence, history, & catches in Caribbean)

- (7): 1059 (distribution & differentiation of *Stenella* populations in E tropical Pac. Ocean)

Dominance (see also Aggression)

- J 32(11): 2133 (influence of size re social rank, in young bluegill)

Donaldson, Edward Mossop

- J 32(4): 533 (corticosteroid concentrations in sockeye salmon exposed to low Cu concentrations)

Donnelly, B. G.

- J 32(7): 1005 (new records of pigmy right whales from S. Africa, with comments on their distribution, migration, appearance, & behavior)

Don-Paul, Mani

- S 2067 (*cis-trans* isomerization of alloxanthin & isolation of an unusually stable *cis*-isomer from a cryptomonad algal culture)

Dosing (apparatus) (see also Apparatus; Bioassay; Toxicants)

- J 32(2): 314; (4): 544; (6): 729; (10): 1849 (various types of)
T 486; 502; 508 (various types of)

Dowd, Richard Gordon

- S 2064 (analysis of fish count data obtained using a digital echo-counting system)
A 326 (a computer echo-counting system for demersal fishes)

Dragonflies (see Odonata)

Drags

- T 532 (effects of scallop, on lobster bottoms near Pictou, N.S.)

Drew, Ralph Edward

- J 32(6): 813 (simplified spectrophotometric curcumin method for determining boron in marine shellfish)

Drilling; Drilling fluids (see also Oils, petroleum)

- T 487 (toxicity of components to aquatic biological systems (literature review))
502 (behavioral responses of lake whitefish & rainbow trout to)
563 (analysis of underwater noise at an offshore oil drilling operation, Bay of Fundy, N.S., & possible effect on herring)

Dunbar, Maxwell John

- J 32(11): 2276 (biological oceanography in Canadian arctic & subarctic waters)

Dunham, Philip James

- J 32(5): 713 (water temperature & housing conditions effects on lobster aggressive behavior)

Duthie, Hamish Crichton

- J 32(1): 117 (preliminary assessment of environmental impact of Churchill Falls hydroelectric project, Labrador)

Dye, Helen Marguerite

- J 32(4): 533 (corticosteroid concentrations in sockeye salmon exposed to low Cu concentrations)

Dyer, Donald C.

- S 2009 (autonomic receptors in isolated rainbow trout vasculature)

Dyer, William John

- J 32(8): 1329 (metabolic fate of injected pyruvate in fresh & ice-stored scallop muscle meats)
(9): 1595 (superchilling temperatures re deteriorative changes in stored postrigor Atl. cod muscle)
CHN 49 (processing of rock crab by meat separators)
A 328 (functional & nutritive food proteins from fish)

Dyes

- J 32(11): 2033 (effects on nitrification in an aqueous recirculating system)
T 489 (effects of, in Canadian textile industry effluents, on aquatic organisms (review))

Dynamics (biological) (see Bioenergetics; Swimming; also Hydrodynamics)

Dynamics, population (see Populations)

E

Earthworms (see Oligochaeta)

Eaton, Catherine Anne

- J 32(4): 507 (fatty components & moisture of Canadian capelin, 1972-73)
(9): 1643 (utilization of wastes from lumpfish roe separation)
CHN 54 (docosenoic fatty acids in Pac. herring oils)
S 2070 (bioacoustic melon & jaw lipids & habitat of a freshwater dolphin)
2089 (utilization of barracudina as source of wax esters & proteins)

Eberhardt, Lester Lee

- J 32(10): 1852 (some methodology for appraising contaminants in aquatic systems)

Ecdysis (see Molting)

Echinarachnius (see Sand dollars)

Echinodermata (see Brittle stars; Heart urchin; Sand dollars; Sea cucumber; Sea urchins; Starfishes)

Echo sounding (see Sounding, echo)

Echolocation, by aquatic animals (see Acoustics; Sound, reactions to; Sounding, echo)

Echolocation, of aquatic animals (see Biotelemetry; Sounding, echo; Tracking; Ultrasonics)

- Ecology; Ecosystems (see also various aspects of, e.g. Environment; Limnology; Palaeoecology; Pollution)
- J 32(1): 97-209 (foreword & 9 articles on environmental impact assessment re hydroelectric projects in Canada — hindsight & foresight)
- (2): 259 (*Heterotanytarsus* Nearctic & Palaearctic chironomids)
- (3): 367 (*Protanypus* Nearctic & Palaearctic chironomids)
- (5): 667, 681 (winter, re young coho salmon, steelhead & cutthroat trout in a stream)
- (6): 817 (effects of kokanee decomposition on alpine stream)
- (6): 821 (proposed classification of fishes by ecology of preferred spawning grounds & reproductive behavior; lists of species (not indexed separately in this index) of Canadian & European fishes in each classification)
- (7): entire issue (biology & fisheries of smaller cetaceans)
- (7): 1069 (aspects of *Stenella* dolphins)
- (9): 1657 (benthic organisms re structure of marine ecosystems)
- (10): 1934 (review of book on coupling of land & water systems)
- (11): 2197 (new techniques for policy evaluation in ecological systems: methodology for a case study of Pac. salmon fisheries)
- (11): 2285 (re populations & communities (book review))
- B 193 (Nearctic & Palaearctic *Heterotrissocladius* chironomids)
- T 487 (drilling fluid components toxicity to aquatic biological systems (literature review))
- 488 (metal mine effluents effects on Canadian aquatic ecosystems (literature review))
- 545-557 (a series on ecological studies of waters of the Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems re proposed petroleum oil pipeline & highway development; see particularly 547; 550; 551; 552; 557)
- 562 (research problems in B.C. streams)
- 567 (cutthroat trout, Great Central L., Vancouver Is., B.C.)
- A 324 (effects of metal derivatives on)
- Economics (see also Fisheries; Management; Resources)
- CNG 100 (B.C. herring fishery & products)
- Ecosystems (see Ecology)
- Edel, Richard Kenneth
- J 32(4): 499 (visual & acoustic estimate of humpback whale population in West Indies)
- Edema
- J 32(12): 2538 (in spawning Pac. salmon)
- Education
- J 32(11): 2231 (extent of, in biological oceanography at various institutions)
- Edwards, Robert Lomas
- J 32(5): 720 (review of book on sea fisheries research)
- Eel, American (*Anguilla rostrata*)
- J 32(9): 1663 (terminology of intervals & stages of development of eels)
- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Eel, blenny (see Cockscomb)
- Eel, wolf (see Eelpout, wolf)
- Eelgrass (*Zostera marina*)
- J 32(5): 615 (chemical changes during seasonal cycle of growth & decay on Canadian Atl. coast)
- MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Eelpout, wolf (*Lycenchelys verrilli*) (wolf eel)
- J 32(10): 1805 (in Gulf of Maine deep basins)
- Eelpouts (Atlantic, uncertain species)
- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Effluents (see Drilling; Hydroelectric projects; Mine wastes; Oils, petroleum; Power plants; Pulpmill effluents; Textile industry effluents)
- Efford, Ian Ecott
- J 32(1): 98(E & F)(foreword to 9 perspective articles on environmental impact assessment of hydroelectric projects in Canada — hindsight & foresight)
- (1): 196 (assessment of impact of hydro dams)
- (11): 2285 (review of book on fisheries re hydroelectric energy production)
- Eggs (see also Cytology; Development; Embryo; Fecundity; Hatchery; Maturity; Ovary; Reproduction; Roe; Spawning; Survival)
- J 32(1): 43 (age estimation of B.C. spiny dogfish from number of maturing eggs & embryos)
- (3): 397 (effects of combinations of light & temperature on embryonic development of rainbow trout)
- (9): 1613 (re cod recruitment in S Gulf of St. Lawrence)
- (9): 1663 (terminology of intervals & stages in fish development)
- (12): 2513 (fatty acid levels in yoke, of brook trout)
- CNG 100 (stages of Pac. herring in B.C. waters)
- T 490; 521 (fish, in Gulf of St. Lawrence plankton collections, 1968; 1969)
- S 2038 (pentachlorophenol in double-breasted cormorant & herring gull, N.B.)
- 2052 (size re radius of scale nucleus in starved vs. normally fed young kokanee & Pac. salmon)
- 2060 (laboratory observations on development & hatching of Pac. halibut)
- Egria laevigata* (see Kelp)
- Egypt, Arab Republic of (see Nasser, Lake)

Ehrenberg, John Edward

- J 32(12): 2547 (threshold-induced bias in acoustic scattering cross-section estimates of individual fish)

Eimeria (see Sporozoa)

Ekman transport (of ocean waters) (see Transport, mass (of waters))

Electrical applications and effects (see also Apparatus; Galvanonarcosis; Power plants; Sounding, echo)

- T 517 (electronic systems for continual monitoring of temperature, pH, conductivity, & dissolved oxygen)
S 2041 (determining muscle lipid content in whole fish by electronics)
A 326 (a computerized echo-counting system for demersal fish)

Electron microscopy

- J 32(3): 416 (perfusion fixation of whole fish for)

Electronics (see Electrical applications and effects)

Elements, chemical (see names of elements; also Analysis methods (chemical); Composition, chemical; Metal ions; Pollution; Toxicants)

Elliot, Susan Eileen Mary

- T 545 (assessment of 2 methods for determining low suspended sediment concentrations in natural waters)
546; 556(1); 556(2) (chemistry, mineralogy, & transport rates of sediments in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)

Elver (see also name of adult fish, e.g. Eel; Lamprey)

- J 32(9): 1663 (terminology of intervals & stages in fish development)

Embryo (see also name of adult organism; also Development; Eggs)

- J 32(6): 821 (proposed classification of fishes based mainly on form & function in early embryonic intervals & features of reproductive behavior, exemplified by descriptions & illustrations of many Canadian & European species (not indexed separately in this index; corrections on J32(8):1505))
(9): 1663 (terminology of intervals & stages in fish development)
T 490; 521 (stages of various fishes in Gulf of St. Lawrence plankton collections, 1968; 1969)
S 2007 (temperature & salinity effects of garfish development)

Emerson, Kenneth

- J 32(12): 2379 (pH & temperature effect on aqueous NH_3 equilibrium)

Empididae

- T 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)

Enchelyopus cimbrius (see Rockling, fourbeard)

Endocrinology (see Corticosteroids; Hormones)

Energetics (see Bioenergetics; Respiration; Swimming)

Engelhardt, Frank Rainer

- J 32(6): 807 (tocopherol composition of frozen Atl. herring tissues & oil)

Englar, John Randall

- T 509 (*Nereocystis luetkeana* seaweed elemental composition over growing season)
561 (estimation of halogen content of *N. luetkeana* over growing season)
568 (composition of nonmetallic inorganic components of *N. luetkeana* over its growing season)

Enhancement of fisheries (see Aquaculture; Coastal zone; Ecology; Environment; Fisheries; International commissions; Management; Research and Development; Resources; Strategy)

Ennis, Gerald Peter

- J 32(2): 271 (lobster larvae reactions to changes in hydrostatic pressure & light)
(11): 2210 (American lobster hatching & larval release)

Environment (see also Behavior; Ecology; Limnology; Oceanography; Pollution; also other factors affecting environment)

- J 32(1): 97-209 (foreword & 9 papers on environmental impact assessment of hydroelectric projects in Canada - hindsight & foresight)
(2): 219 (& intrinsic control of arctic *Daphnia* cladoceran feeding rates)
(8): 1465 (aquatic, as investigated by FRBC (summary))
(10): 1733 (factors effects on W Lake Erie walleye year-class strengths)
(11): 1971, 1989 (Great Bear L., N.W.T., re fish species distribution)
T 493 (mathematical models & computer program for effects of environmental factors on biological phenomena)
545-555; 556(1); 556(2); 557 (a series on ecological & environmental studies of waters in the Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems re proposed oil pipeline & highway development)
S 2023 (organizational impediments to effective environmental impact research)
2039 (re maturity & reproduction of harp seal)
A 324 (re pollution by heavy metals & their derivatives (review))

Enzymes

- J 32(1): 61 (acyltransferase activity re glycerol 3-phosphate incorporation into liver lipids of rainbow trout)
- (8): 1289 (leucine aminonaphthylamidase isozymes localization in rainbow trout, re fish pathobiology diagnostic value)
- (8): 1459 (acid phosphatase localization re channel catfish hepatic morphology)
- (9): 1633 (cholinephosphotransferase re lecithin biosynthesis pathway)
- (11): 2061 (activation energy & allosteric inhibition of reaction catalyzed by aspartate transcarbamylase from Atl. cod ovary)
- (11): 2091 (various, re genetic variation & structure of American lobster populations)
- (11): 2153 (acetylcholinesterase re largemouth bass pectoral abductor muscle neuromuscular function, & its inhibition by diisopropyl-fluorophosphate)
- S 2018 (NAD- & NADP-malic in spermatozoa of man, bull, Atl. salmon & cod)
- 2033 (thiaminase re Atl. herring as dietary component in Atl. salmon culture)
- 2037 (adenine-derivative, re nucleotide degradation of iced & cooked American lobster tail muscle)
- 2056 (freshness of iced salmonids re enzymatic lactic acid formation in muscle extracts)
- 2069 (review of lipolytic)
- 2087 (effects of various amino acids & certain nucleotides on algal threonine deaminase activity)
- A 324 (metal derivatives effects on activity (review))

Eopsetta jordani (see Sole, petrale)

Ephemeroptera (mayflies)

- J 32(8): 1455 (toxicity of a larval lampricide to various species)
- T 547; 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)

Epibenthos (see Benthos)

Epizootiology (see Tumors)

Equipment (see Apparatus)

Erickson-Elphinstone District Lakes, SW Man. (some saline)

- J 32(8): 1283 (possibilities of predicting summerkill risk in ponds)
- T 510 (geography & lake morphometry of many of these mainly eutrophic prairie pothole lakes)
- 511 (geochemistry & nutrient regime of many)
- 512 (phytoplankton successions & species distribution in many)
- S 2019 (extreme fluctuations in water quality, re winterkill, summerkill, & sediment mixing)

Erie, Lake, Ont. & USA

- J 32(10): 1733 (environmental factors affecting walleye year-class strengths in W)

- S 2017 (Hg, Cu, Cd, & organochlorine residues in yellow perch, white & smallmouth bass, (Ont.))

Erignathus barbatus (see Seal, bearded)

Errata (see Corrections)

Escapement (see Catches; Fisheries; Management; Migration; Spawning)

Eskimo (see Inuit)

Eskin, Neason Akiva Michael

- J 32(2): 227 (antioxidants for deterring deterioration of canned lake whitefish)

Exos lucius (see Pike, northern)

niger (see Pickerel, chain)

Establishments (see Laboratories and Establishments)

Esters (see Acids, fatty; Alcohols, fatty; Lipids; Oils, fatty, and fats; Triglycerides; Wax ester)

Estuaries

- J 32(1): 72 (primary production inhibition through heterotrophic competition for nitrate in stratified waters of Alberni Inlet, B.C.)
- (2): 233 (ultrasonic tracking of sockeye salmon entering Skeena R., B.C.)
- (5): 587 (fatty acids of young Atl. menhaden as tracers of their diet in)
- (8): 1465 (as investigated by FRBC (summary))
- (12): 2373 (penetration of St. Lawrence estuarial surface water into deep-water layer of Saguenay fjord, Que.)
- (12): 2525 (acute toxicity of chlorine in waters of, to various fishes & invertebrates)
- T 468 (zonation of intertidal biomass & related benthic data from Sturgeon & Roberts banks off mouth of Fraser R., B.C.)
- 476 (macroinvertebrate communities distribution on a mud flat influenced by sewage, Fraser R. delta)
- 482 (bibliography of studies on Canadian Atl. coastal, by authors & provinces)
- 537 (residence duration & growth of juvenile chinook salmon in Nanaimo R., B.C.)
- 571 (physical oceanography of Miramichi R., N.B.)

Ethers

- S 2070; 2080 (glyceryl, in lipids of whale, dolphin, & porpoise jaw, melon, & blubber)

Euglenophyta

- T 512 (species distribution in some SW Man. prairie pothole lakes)
- 513 (seasonal successions in some NW Ont. lakes following artificial eutrophication)
- 533 (abundance & biomass re experimental cropping of some N.W.T. lakes)

Eulachon (*Thaleichthys pacificus*)

- T 496; 503 (catches during B.C. herring surveys, offshore SW Vancouver Is., 1972 & 1973, Juan de Fuca Strait, 1971)
 497 (catches during groundfish survey, Queen Charlotte Sound area, B.C., Sept. 1974)

Euphausia (see Euphausiacea)

Euphausiacea

- J 32(2): 310 (DDT residues in *Meganyctiphanes norvegica*, *Thysaniioessa raschii*, & *T. inermis* in upper St. Lawrence R. estuary)
 (11): 2189 (*Euphausia pacifica* ammonia & inorganic phosphorus excretion re marine phytoplankton concentration)

Eutrophication (see also Lakes; Limnology; Nutrients, aquatic; Oceanography; Oxygen, dissolved; Pollution; Sediments; Summerkill; also other causes of)

- J 32(9): 1673 (review of book on modelling the eutrophication process)
 T 510; 511; 512 (SW Man. prairie pothole lakes)
 513 (phytoplankton seasonal succession following artificial, of 7 lake basins of NW Ont. Experimental Lakes Area)
 S 2019 (SW Man. prairie pothole lakes)
 2022 (causes & results (general))
 2078 (studies on a fertilized lake)

Evelyn, Trevor Patrick Todd

- J 32(9): 1640 (*Ceratomyxa shasta* myxosporidean disease in B.C. chum salmon)

Excretion

- J 32(10): 1873 (of coho salmon urine after acute exposure to TFM lampricide)
 (11): 2189 (ammonia & inorganic phosphorus by marine zooplankton re phytoplankton concentrations)
 (12): 2479 (daily pattern of nitrogen excretion (as urea & ammonia) by young sockeye salmon under controlled conditions)

Exercise (see Activity; Swimming)

Exner, O.

- S 2011 (acceptor ability of the $-B(OR)_2$ boronic ester group)

Experimental Lakes Area, Northwestern Ont.

- J 32(3): 389 (crustacean zooplankton communities)
 T 513 (phytoplankton seasonal succession following artificial eutrophication in 7 lake basins)
 559 (light penetration & color of waters, 1969-73)
 560 (phytoplankton production, 1969-72)
 S 2010 (measurement of microbial oxidation of methane in water)
 2078 (effects of P & N fertilization of Lake 227)

Exploitation (see also Catches; Fisheries; Resources; Yield)

- J 32(3): 427 (re dynamics of lake whitefish, & their management, particularly in N.W.T.)
 (7): 891-945 (past & present, of many species of smaller cetaceans, by species)
 (7): 1073 (of Franciscana dolphin in Uruguay)
 (7): 1079 (of smaller cetaceans, Greenland)
 (8): 1305 (spatial model for a shellfish population)
 (8): 1369 (sockeye salmon, Skeena R., B.C.)
 (8): 1383 (re changes in abundance & biology of American plaice, Grand Bank, off Nfld.)
 (10): 1777 (optimal harvest strategies for Skeena R. sockeye salmon)
 (10): 1825 (analysis of commercial, re maximum economic yield in biologically & technologically interdependent fisheries)
 (12): 2569 (re international joint ventures in fishing & 200-mile economic zone)

Eye (see also Light, reaction of organisms to)

- J 32(10): 1711 (fine structure of retinal photoreceptors in northern pike)

Eyman, L. D.

- J 32(11): 2227 (sublethal effect of 5-chlorouracil on carp larvae)

F

Faber, Daniel James

- T 490; 521 (eggs, larvae, & young of fishes from 1968 & 1969 Gulf of St. Lawrence plankton collections)

Fagerlund, Ulf Henrik Mathias

- J 32(4): 554 (acute toxicity of kanamycin to steelhead trout)

Farmer, Gilbert John

- J 32(5): 623 (system simulation of sea lamprey predation on lake trout)

Farming (see Aquaculture; Pen, fish)

Fatigue (see Stimuli; Swimming)

Fats (see also Acids, fatty; Blubber; Lipids; Oils, fatty, & fats; Triglycerides)

- J 32(11): 2214 (yellow perch fat content seasonal changes)
 T 500 (as condition index)

Feathers

- T 498 (analysis procedures & computer program for content of chemical elements in waterfowl)

Fecundity (see also Eggs; Reproduction; Spawning; also names of organisms)

- J 32(3): 404 (comparisons for various lake whitefish stocks in lakes near Yellowknife, N.W.T.)
 (8): 1439 (of the Puget Sound rockfish)

Fee, Everett John
S 2051 (primary production in fresh water)

Feed; Feed chain or web; Feeding behavior or habits; Stomach contents (see also Aquaculture; Benthos; Bioenergetics; Culture; Diet; Environment; Feedstuff; Food (for man); Growth; Metabolism; Predation; Productivity; Starvation; etc.; also names and types of organisms concerned)

- J 32(1): 33 (re metabolic rate & swimming speed of a pelagic fish (bleak))
- (2): 219 (environmental & intrinsic control of filtering & feeding rates of arctic *Daphnia*)
- (2): 243 (relation of an amphipod to trophic position in feed web of young salmonids)
- (2): 314 (automatic brine shrimp feeder for aquatic bioassays)
- (4): 479 (of American plaice re trematode parasite incidence)
- (5): 706 (nonselective, of *Pseudocalanus minutus* calanoid copepod (correction on J32(8): 1505))
- (6): 747 (composition of blue whiting re utilization for pet & fish feed)
- (7): 891-945 (feeding & nutrition in nature & oceanaria, of many species of smaller cetaceans, by species)
- (7): 1041 (of narwhal, in E Canadian waters)
- (7): 1073 (of Franciscana dolphin)
- (8): 1339 (vs. water re accumulation of ⁶⁵Zn by marine biota)
- (8): 1347 (Atl. mackerel in Nfld. waters)
- (8): 1419 (size of epibenthic prey selected by young chum salmon, Puget Sound, Wash.)
- (9): 1657 (feeding & feed web of fishes re marine ecosystems structure)
- (10): 1785 (& predators of yellow perch, L. Memphremagog, Que. & Vt.)
- (11): 2111 (polychlorinated biphenyls presence & distribution in arctic & subarctic marine)

CHN 55 (addition of red fish oils to, for enhancing flesh color of trouts & salmon)

CNG 100 (Pac. herring in B.C. waters)

T 496; 503 (spiny dogfish stomach contents, offshore SW Vancouver Is., 1972 & 1973; Juan de Fuca Strait, 1971)

500 (blue mussel raised in cages in 2 N.S. embayments)

501 (effects of reduced winter rations on growth & survival of cultured young coho salmon)

542 (B.C. commercial groundfish fishery catches for animal feed, 1974 data record)

567 (of cutthroat trout, Great Central L., Vancouver Is.)

S 2044 (assimilation, metabolism, & growth efficiency of *Clione limacina* pteropod)

2052 (feeding vs. starvation effects on scale circulus formation, scale nucleus size re egg size, fish length & weight, in young kokanee & Pac. salmon)

2063 (seasonal changes in feeding & particle selection by winter flounder)

2075 (feed web, re production in marine planktonic communities)

2083 (rough-legged hawk as arctic carrion feeder)

Feedstuff (see also Feed; Fish protein concentrate; Meals)

T 509 (potential of B.C. kelp)

542 (B.C. commercial groundfish fishery landings for animal feed, 1974)

A 323 (from lobster processing scrap)

Feller, Robert Jarman

J 32(8): 1419 (size selective predation on epibenthic prey by young chum salmon in Puget Sound, Wash.)

Fenitrothion pesticide

S 2025 (GLC determination in fish, water, & sediment)

2076 (biochemical & residue studies on rainbow trout after field & laboratory exposures to)

2077 (field & laboratory studies of effect of exposing freshwater aquatic invertebrates to)

2082 (avoidance by goldfish)

Feresa attenuata (see Whale, pygmy killer)

Fertilizers; Fertilization (see also Aquaculture; Eutrophication; Lakes; Nutrients, aquatic)

T 509 (potential of B.C. kelp)

553 (nutrient enrichment of a lake for possible enhancement of petroleum oil biodegradation)

S 2022 (re eutrophication)

2078 (results of, on an Experimental Lakes Area lake, NW Ont.)

Fillets (see also Quality of fishery products; Refrigeration)

J 34(4): 541 (*Vibrio parahaemolyticus* pathogen found in only 1 of 119 samples of, from various Canadian Atl. coast fishes)

(6): 747 (chemical composition & possible increased utilization of blue whiting)

(6): 775 (protein instability during storage of minced flesh from, at -5 C, re several commercial Atl. marine fishes)

(8): 1450 (preheat treatment for improvement of frozen storage stability at -10 C, from silver hake)

(9): 1595 (superchilling temperature re deteriorative changes in stored postrigor Atl. cod)

(12): 2333 (factors re attractiveness of NE Atl. cod)

T 514 survey & characterization of Canadian & imported commercially canned herring)

536 (quality of canned lightly smoked, from Pac. herring stored at sea)

Filtering

J 32(2): 219 (environmental & intrinsic control of *Daphnia* filtering & feeding rates)

Findlay, David Lloyd

- T 513 (seasonal succession of plankton in 7 lake basins of NW Ont. Experimental Lakes Area following artificial eutrophication)

Fingerling (*see* name of adult fish, e.g. Salmon; Trout)

Fins

- J 32(1): 43 (age estimation of B.C. spiny dogfish from markings on second dorsal spine)
 (4): 471 (rays, for delineating spring & autumn herring in Gulf of St. Lawrence)
 (5): 643 (pectoral: shape & movement changes as Atl. salmon alevins develop)
 (5): 653 (rays, re meristic differences in American shad spawning populations)
 (10): 1867(F) (spiny rays of pectoral & dorsal, re age & growth of channel catfish)

Fiords; Fjords (*see* Inlets; Muir Inlet; Saguenay River)Firmness of flesh (*see* Flesh; Quality of fishery products)Fish farming (*see* Aquaculture; Nutrients, aquatic; Pen, fish)Fish meal (*see* Fish protein concentrate; Meals; Wastewaters)Fish oils (*see* Acids, fatty; Lipids; Oils, fatty, & fats)Fish processing, products, and by-products (*see* Fish processing wastes; Fish protein concentrate; Fishery products)Fish processing wastes (*see also* Fillets; Wastewaters)

- J 32(9): 1643 (lipids, glue, & meal from lumpfish wastes after roe separation)
 T 575 (quality & quantity of deboned flesh recovered from Pac. cod filleted frames)

Fish protein concentrate

- S 2089 (from white barracudina)
 A 328 (modified process to yield functional fish protein)

Fisheries (*see also* Abundance; Angling; Aquaculture; Catches; Census; Coastal zone; Economics; Environment; Exploitation; International commissions; Law; Management; Perspectives; Populations; Research and Development; Resources; Stocks; Strategy; Surveys; Yield; etc.; *also* names of commercial fishes, invertebrates, and marine mammals; *also* Seaweeds)

- J 32(3): 427 (dynamics of exploited lake whitefish populations & their management, particularly in N.W.T.)
 (3): 449 (management of marine (review of book))
 (5): 720 (review of book on sea fisheries research)
 (7): 891-945 (synopses of, for smaller cetaceans, by species), 945-952 (synopses of, for smaller cetaceans, by regions in oceans), 952-954 (types of, for smaller cetaceans)
 (7): 985 (Nfld. minke whale)
 (7): 1041 (Canadian narwhal)

- (7): 1073 (Uruguayan Franciscana dolphin)
 (7): 1083, 1163 (Norwegian, for small whales)
 (7): 1105 (dolphins & small whales in Caribbean & West Indies)
 (7): 1155 (former net fisheries for NW Atl. bottle-nose dolphin)
 (7): 1191, 1197, 1213 (live, of smaller cetaceans for public display in aquaria or oceanaria)
 (8): 1305 (spatial model for exploited shellfish, e.g. Georges Bank scallop fishery off N.S.)
 (8): 1369 (revised interpretation of history of Skeena R., B.C., commercial sockeye salmon catches)
 (8): 1383 (changes in abundance & biology of American plaice, Grand Bank, off Nfld.)
 (8): 1500 (review of book on N Pacific)
 (10): 1777 (optimal harvest strategies for Skeena R. sockeye salmon)
 (10): 1825 (analysis of commercial exploitation & maximum sustained yield in biologically & technologically interdependent)
 (10): 1887-1932 (perspective: science for Canada's shelf-seas fisheries)
 (11): 2163 (graphical methods for estimating parameters for a Schaefer model of a fishery)
 (11): 2179 (new techniques for policy evaluation in ecological systems: methodology for a case history of Pac. salmon fisheries)
 (12): 2569 (international joint ventures in fishing & 200-mile economic zones)
 CNG 100 (Pac. herring in B.C. waters: growth, efficiency, gear, economic value, etc.)
 T 504; 566 (1000-reference bibliographies to Canadian limnology re freshwater fisheries, keyed to lists of freshwater bodies)
 542 (B.C. commercial groundfish: catch & effort statistics data record, 1974)

Fisheries Research Board of Canada (FRBC) (now operating as part of Environment Canada, Fisheries and Marine Service)

- J 32(8): 1465 (perspective re its 75 years of achievements, 1488 (appendix re history of its principal establishments to 1973))

Fishery, sport (*see* Angling; Aquaculture; Feed, *also* names of sport fishes)Fishery gear (*see* Apparatus; Gear, fishery (and other subjects listed in that heading); Nets)Fishery products (including processing of) (*see also* Apparatus; Blubber; Canning; Chilling; Feed; Feedstuff; Fillets; Fish protein concentrate; Flesh; Food; Freezing; Ice; Kelp; Meat; Oils, fatty; Quality of fishery products; Refrigeration; Roe; Sauces; Sea water, refrigerated; Smoking; Wastewaters; attributes such as color, firmness, flavor, odor, texture, etc., are included under Quality of fishery products. *See also* names of fishes, marine mammals, and aquatic invertebrates contributing to such products)

- J 32(4): 541 (incidence of *Vibrio parahaemolyticus* bacteria in Canadian Atl. marine)
 (6): 747 (various, from blue whiting)
 (6): 775 (protein instability in stored minced flesh sometimes caused by included gadoid kidney tissue)
 (7): 954-956 (synopsis of utilizations of smaller cetaceans)
 (7): 1101 (from long-finned pilot whale in Ireland, 1909-22)
 (7): 1111 (from Japanese small-whale fishery)
 (7): 1163 (meat, blubber, & oil products from Norwegian small-whale fishery)
 (8): 1465 (processing & storage, as investigated by FRBC (summary))
 (9): 1643 (from lumpfish wastes after recovery of roe)
- CHN 49 (processing of cooked crab meat by meat separators)
 50 (recovery of minced flesh from headed & gutted, or filleted frames from, various Atl. fishes) (B.C. herring roe for Japanese market)
- CNG 100 (Canadian & imported canned Atl. herring)
- T 514 (B.C. herring roe for Japanese market)
 536; 569 (B.C. herring roe for Japanese market)
 542 (B.C. commercial groundfish fishery catches for animal feed & reduction, 1974)
 574 (formulated breaded product from mechanically deboned flesh of freshwater fish (e.g. white sucker))
 575 (quality & quantity of deboned flesh recovered from various B.C. underutilized marine fishes)
- S 2071 (phytanic acid levels in many (not indexed separately; see Phytanic acid))
 2088 (review of marine lipids & fatty acids of many (not indexed separately), re human nutrition)
- A 323 (from American lobster)
- Fishes (in general)
 J 32(6): 821 (perspective proposal & definition for classification of fishes by reproductive guilds; lists of species (not indexed separately in this index; corrections to names on J 32(8): 1505) of Canadian & European fishes in each classification, with illustrations of embryonic development)
- Fishes, freshwater (generally indexed under their common names, cross-referenced from their scientific names) (See also Lakes; Limnology; also Fishes (in general); Fishes, lists of; Fishery products)
 J 32(1): 211 (review of book on control & treatment of parasites of)
 (8): 1465 (as investigated by FRBC (summary))
 (11): 1989 (distribution, Great Bear L., N.W.T. (not all indexed separately))
 (12): 2295 (oxygen requirements (review))
- B 190 (hydrodynamics & energetics of propulsion of many species (not indexed separately; has its own indexes))
 191 (computation & interpretation of biological statistics of populations (not indexed separately; has its own index))
- T 504; 566 (1000-reference bibliographies to Canadian, by names of bodies of water)
 505 (index to, & list of titles of publications by staff of Fisheries Research Board of Canada, Winnipeg & London, freshwater fish research establishments, 1944-73)
 A 327 (review of book on diseases & parasites of)
- Fishes, lists of (including some species not indexed individually)
 J 32(6): 821 (re proposal for classification of fishes by reproductive guilds)
 (8): 1259 (freshwater eggs & young origin & survival when pumped between 2 reservoirs)
 (12): 2453 (data for 3137 species re pleomerism)
- Fishes, marine (generally indexed under their common names, cross-referenced from their scientific names) (See also Fishes (in general); Fishes, lists of; Fishery products)
 J 32(12): 2295 (review of oxygen requirements)
 B 190 (hydrodynamics & energetics of propulsion of many species (not indexed separately; has its own indexes))
 191 (computation & interpretation of biological statistics of populations (not indexed separately; has its own index))
 A 327 (review of book on diseases & parasites of)
- Fitzgerald, Durell Nelson
 J 32(9): 1613 (stock biomass & temperature role in recruitment of S Gulf of St. Lawrence cod)
- Fitzgerald, Paul Ray
 J 32(5): 649 (new coccidia from spiny dogfish & great sculpin)
- Fixation
 J 32(3): 416 (perfusion, for electron microscopy of fish tissues)
- Fjords; Fiords (see Inlets; Muir Inlet; Saguenay River)
- Flannagan, John Fullan
 T 517 (electronic systems for continual monitoring of temperature, pH, conductivity, & dissolved oxygen)
 S 2077 (field & laboratory studies of fenitrothion insecticide exposure effects on freshwater invertebrates)
- Flatfishes (see Groundfish)
- Flavor (see Quality of fishery products)
- Flesh (see also Feed; Fillets; Food; Meat; Proteins; Quality of fishery products)
 J 32(6): 747 (minced: utilization of blue whiting for minced block)
 (6): 775 (protein instability in minced, from fillets & frames of several Atl. marine fishes, during storage at -5 C)

- (6): 795 (Hg & methyl-Hg in seal, caribou, & Arctic char food of Inuit, & of feed for sledge dogs, at Holman, N.W.T.) (8): 1450 (preheat treatment for improvement of frozen storage stability at -10 C in minced, of silver hake)
- CHN 49 (recovery from cooked rock crab by meat separators)
- 50 (separation as minced flesh from headed & gutted, or filleted frames from, various Atl. fishes)
- 55 (enhancement of salmonid flesh color by feeding fish oils in diet)
- T 484 (instrumental vs. visual sorting of color, of raw vs. canned Pac. salmon)
- 574 (pilot plant application of processing improved formulated breaded product from flesh of mechanically deboned freshwater fish (e.g. white sucker), & judging of quality by taste panel)
- 575 (quality & quantity of deboned, recovered from various B.C. underutilized marine fishes)
- S 2026 (chemical dissolution of, in minced samples of fish, for assay of bone content)
- Fletcher, Garth Leonardo
J 32(1): 78 (Cu, Zn, & total protein levels in plasma of spawning migratory sockeye salmon)
(12): 2581 (review of book on experimental marine biology)
- Flexibacter columnaris* (see Bacteria; Columnaris disease)
- Flick, William Arthur
J 32(8): 1359 (wild brook trout habits in a stream population during removal of nontrout species)
- Flies (for blackflies, see Diptera; caddisflies, see Trichoptera; dragonflies, see Odonata; mayflies, see Ephemeroptera; midges, see Chironomidae; stoneflies, see Plecoptera)
- Flint, R. Warren
J 32(12): 2433 (*Pacifastacus leniusculus* crayfish growth in subalpine L. Tahoe, Calif.)
- Florida, USA
J 32(7): 1055 (aerial census of bottlenose dolphin)
- Flotation agents (see also Mine wastes)
T 488 (literature review of xanthates, etc., in mine effluents re effects on aquatic ecosystems)
S 2047 (estimation of a thionocarbamate-type in mine wastes by GLC)
- Flounder, arrowtooth (*Atheresthes stomias*) (turbot)
T 497 (catches during groundfish survey, Queen Charlotte Sound area, B.C., Sept. 1974)
575 (yield & composition of deboned flesh from headed & gutted)
- Flounder, starry (*Platichthys stellatus*)
T 542 (catches & effort in B.C. commercial groundfish fishery: 1974 data record)
- Flounder, summer (*Paralichthys dentatus*)
T 526: 34 (incidental to groundfish fishery in ICNAF areas)
- Flounder, winter (*Pseudopleuronectes americanus*) (gray sole)
J 32(6): 729 (attractiveness of natural baits & some chemicals to, in its natural habitat)
(9): 1539 (blood oxygen dissociation characteristics of)
CHN 50 (separation of minced flesh & bone from filleted frames)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
526: 34 (incidental to groundfish fishery in ICNAF areas)
S 2038 (pentachlorophenol in N.B.)
2063 (seasonal changes in feeding & particle selection, N.S.)
- Flounder, witch (*Glyptocephalus cynoglossus*) (gray sole)
J 32(6): 775 (relative stability of minced flesh during storage at -5 C)
(8): 1447 (abundance of young by size, depth, & temperature off Virginia coast)
T 490; 521 (as for Flounder, winter, above)
526 (current status of stocks & recent annual catches, ICNAF areas)
- Flounder, yellowtail (*Limanda ferruginea*) (yellowtail)
T 490; 521 (as for Flounder, winter, above)
526 (current status of stocks & recent annual catches in ICNAF areas)
- Flow (of water) (see also Apparatus; Currents; Dams; Flume; Swimming, Tides)
J 32(12): 2441 (possible role of brook trout lateral line in positioning to flow patterns around bottom obstructions)
T 562 (implications of controlled flow projects on B.C. stream ecology)
573 (effect of rate, of CuSO₄ toxicant solution, on rainbow trout survival)
- Flume
J 32(5): 633 (for observing fish spawning in laboratory)
- Fly (see Flies)
- Fonds, M.
S 2007 (temperature & salinity influence on garfish embryonic development, larval growth, & vertebral number)
- Food (for man) (see also Fishery products; Quality of fishery products)
J 32(6): 747 (utilization of blue whiting)
(6): 795 (Hg & methyl-Hg in liver & muscle of seals, Arctic char, & caribou used by the Inuit for food at Holman, N.W.T.)
(7): 1163 (meat from Norwegian small-whale fishery: preparation, inspection, & by-products)

- S 2088 (marine lipids & fatty acids in nutrition)
A 328 (functional & nutritive food proteins from fish, as fish protein concentrate)
- Food (for other than man) (see Feed; Feedstuff)
- Foote, Don Charles
J 32(7): 1163 (small-whale hunting in N Norway, 1964)
- Ford, Jerry Seymour
T 467 (echo integrator absolute constants put into real numbers)
- Forecasting; Prediction
J 32(8): 1283 (possibilities of, for summerkill risk in SW Man. prairie ponds)
(8): 1305 (predictions of a spatial model for an exploited shellfish population)
(9): 1519 (simple method, for lake capacity development)
T 523 (mathematical representation & prediction of phytoplankton productivity & biomass)
- Forestry; Logging; Reforestation (see also Pollution; Pulp-mill effluents)
T 562 (re research problems in B.C. stream ecology)
S 2022 (re eutrophication)
- Forrester, Clifton Roger
S 2060 (laboratory observations on Pac. halibut early development)
- Fossils (see Brachiopoda)
- Fowler, Scott Wellington
J 32(8): 1339 (relative importance of feed & water in ⁶⁵Zn accumulation by marine biota)
- Fowler, Bruce A.
J 32(10): 1767 (mercury & iron uptake by quahog clam mantle cells)
- Fox, Arctic (*Alopex lagopus*)
J 32(6): 795 (mercury in, from Holman, N.W.T.)
- Fradette, Catherine
J 32(10): 1867(F) (age determination re growth of channel catfish from spiny rays of pectoral & dorsal fins)
- Franciscana (*Pontoporia blainvillei*) (a dolphin)
J 32(7): 945 (overview), 947 (distribution), 956, 1229 (incidental captures)
(7): 1073 (biology in Uruguayan waters)
- Frank, Richard
S 2017 (organochlorine residues, Hg, Cu, & Cd in yellow perch, white & smallmouth bass, L. Éric, Ont.)
- Fraser River system, B.C.
J 32(1): 126 (ecological consequences of proposed Moran Dam on)
- Fratercula corniculata* (see Puffin, horned)
- FRBC (see Fisheries Research Board of Canada)
- Frederick, Lynn L.
J 32(10): 1705 (comparative uptake of polychlorinated biphenyl & dieldrin by white suckers)
- Freeman, Harry Cleveland
S 2029 (arsenic determination in marine organisms)
2057 (sublethal Cd effects in vitro on brook trout maturation, & testosterone & ketotestosterone production)
- Freeman, Kenneth R.
T 500 (*Mytilus edulis* mussel growth, mortality, & seasonal cycle in 2 N.S. embayments)
- Freese, Manfred
S 2041 (lipid content determination in whole fish using ultrasonics)
- Freezing (see Chilling; Quality of fishery products; Refrigeration; Superchilling)
- Freshness (see Quality of fishery products)
- Freshwater fishes (see Fishes, freshwater)
- Fry (see also name of adult fish, e.g. Trout; Salmon)
J 32(9): 1663 (terminology of intervals & stages in fish development)
- Fryer, Geoffrey
J 32(12): 2582 (review of book on African tropical limnology)
- Fryer, John Lewis
J 32(9): 1545 (water temperature re ceratomyxosis in rainbow trout & coho salmon)
(9): 1553 (water temperature re *Flexibacter columnaris* infection in steelhead trout, chinook & coho salmon)
- Fucus* (see Pheophyta; Wrack, bladder)
- Fuel oils (see Hydrocarbons; Oils, petroleum)
- Fulvic acid (see Humic substances)
- Fundulus heteroclitus* (see Mummichog)
- Fundy, Bay of (N.S. & N.B.)
J 32(7): 1019 (biological data of stranded northern bottlenose whales)
T 563 (analysis of underwater noise at a petroleum oil offshore drilling operation, & possible effect on herring)

Fungicide

- J 32(1): 69 (Furanace antimicrobial possible use for fish embryos)

Fungus

- J 32(9): 1648 (a plant saprophyte, *Phoma herbarum*, pathogenic to rainbow trout, coho & chinook salmon)

Furanace (see Antimicrobial agents; Fungicide)

Fur-bearing animals (see Dog; Seal, northern fur; Wolf (arctic))

G

Gadus macrocephalus (see Cod, Pacific)
morhua (see Cod, Atlantic)

Gaffkemia (see Lobster pathogen)

Gaffkya homari (now *Aerococcus viridans* (var.) *homari*) (see Lobster pathogen)

Gallucci, Vincent Frank

- J 32(9): 1637 (mortality of *Transennella tantilla* immature clams when buried under sediment)

Galvanonarcosis

- J 32(2): 300 (for rainbow trout immobilization)

Gammarus (see Amphipoda)

Gardella, Edward Stewart

- S 2034 (hydrophone system for determining swimming depth of fish fitted with ultrasonic transmitters)

Garfish (*Belone belone*)

- S 2007 (temperature & salinity influence on development)

Gaspereau (see Alewife)

Gasterosteus aculeatus (see Stickleback, threespine)

wheatlandi (see Stickleback, blackspotted)

Gastropoda (see also Limpets; Periwinkles; Pteropoda; Snail, moon; Whelk)

- T 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
S 2055 (of arctic S Beaufort Sea zoobenthos)

Gear, fishery (see also Apparatus; Drags; Harpoon; Nets; Traps; Trawl)

- J 32(8): 1465 (& techniques, as investigated by FRBC (summary))

Gee, John Henry

- J 32(2): 303 (tadpole madtom & black bullhead buoyancy adjustment to water velocity)

Geen, Glen Howard

- J 32(1): 126 (ecological consequences of proposed Fraser R. Moran Dam, B.C.)

Gehrs, C. W.

- J 32(11): 2227 (sublethal effect of 5-chlorouracil on carp larvae)

Geiger, Shirley Evelyn

- T 536 (storage of Pac. roe herring at sea)

Geissel, Lester

- J 32(8): 1455 (comparative toxicity of a larval lampicide to selected Great Lakes benthic macroinvertebrates)

Genera (see Classification; Nomenclature; Species, new; Taxonomy)

Genetics

- J 32(2): 295 (cytotaxonomy of inconnu (*Stenodus*) re that of lake whitefish (*Coregonus*))
(4): 571 (studies of fish (book review))
(9): 1672 (fish genetics & mutagenesis (book review))
(11): 2091 (genetic variations & structure of American lobster populations)
(12): 2471 (genetic variation in Pac. oyster)

Genitalia

- S 2043 (morphology & terminology of *Chironomus tentans* midge fly)

Geochemistry

- T 511 (SW Man. prairie pothole lakes)

Geography (see Morphology (physical); Physiography)

Geology (see also Glaciers; Morphology (physical))

- J 32(11): 1971 (Great Bear L., N.W.T.)
S 2084 (surficial, of Gulf of St. Lawrence)

George Lake, Ont.

- S 2008 (effect of long-term acidification on fishes)

Georges Bank, off N.S.

- J 32(8): 1305 (spatial model application to its exploited scallop fishery)
T 524 (phytoplankton production, nutrients, & density structure, Aug. 1974)

Georgia, Strait of, B.C. (see also Estuaries; Gulf Islands; Inlets; Malaspina Strait; Oceanography, northeast Pacific coastal)

- J 32(1): 126 (ecological consequences of proposed Fraser R. Moran Dam on)
(9): 1561 (annual & longer term variations of deep-water properties; also for contiguous Sutit Channel & Boundary Pass)

- Geraci, Joseph Robert
J 32(6): 807 (tocopherol composition of frozen Atl. herring tissues & oil)
(12): 2559 (functional hematology of Canadian arctic ringed seal)
- Geryon *quinquedens* (see Crab, red)
- Gibbard, Glen Arthur
T 536 (storage of Pac. roe herring at sea)
- Gibson, Robert John
J 32(9): 1652 (brook trout & young Atl. salmon selection of shade re water depth)
- Gillnets (see Nets)
- Gills; Gill rakers (see also Operculum; Respiration)
J 32(4): 471 (for delineating spring & autumn herring in S Gulf of St. Lawrence)
(11): 2005, 2015 (effects of CH₃HgCl & HgCl₂ on young rainbow trout)
(12): 2552 (uptake of Zn by Atl. salmon)
S 2016(F) (uptake of ferric Fe in American lobster & shore crab)
- Giovando, Lawrence Frank
J 32(2): 253 (merchant ship observations of sea-surface temperatures near Pac. Ocean Weather Station "P," 1927-33)
- Gjerde, Jan
J 32(5): 699 (simple rapid technique for repeated blood sampling in rainbow trout)
- Glaciers
J 32(10): 1693 (effect on seasonal characteristics of Muir Inlet water masses, Alaska)
S 2084 (effects on physiography & sedimentology of Gulf of St. Lawrence)
- Glenn, Clifford Lawrence
J 32(3): 407 (annual growth rates of Assiniboine R. mooneye)
- Globicephala macrorhynchus* (see Whale, short-finned pilot)
melaena (see Whale, long-finned pilot)
scammoni (see Whale, Pacific pilot)
- Glossary (see also Terminology)
J 32(11): 2265 (scientific terms used in biological oceanography)
(12): 2295 (of terms re minimal dissolved oxygen requirements & tolerances of aquatic life)
MSP 27 (of terms re anatomy & physiology of Pac. salmon)
- Glucose (see also Sugars)
J 32(6): 753 (pulpmill effluent effects on metabolism by young coho salmon)
- Glue
J 32(9): 1643 (possible product from lumpfish skin)
- Glycerides (see also Acids, fatty; Lipids; Oils, fatty, & fats; Triglycerides)
J 32(1): 61 (biosynthesis of 3-phosphate into rainbow trout liver lipids)
- Glyceryl ethers
S 2070; 2080 (diacyl, of lipids of whale, dolphin, & porpoise jaw, melon, & blubber)
- Glycogen
J 32(6): 753 (effects of acute exposure to pulpmill effluent on young coho salmon muscle & liver, during rest & exercise)
- Glyptocephalus cynoglossus* (see Flounder, witch)
zachirus (see Sole, rex)
- Gobiesox maeandricus* (see Clingfish, northern)
- Gobius* sp.
J 32(8): 1339 (feed vs. sea water re uptake & accumulation of ⁶⁵Zn by)
- Goldfish (*Carassius auratus*)
J 32(9): 1589 (effects of predation by, on zooplankton of a small saline lake)
S 2082 (avoidance of fenitrothion pesticide)
- Goldman, Charles Remington
J 32(6): 817 (kokanee salmon decomposition effects on subalpine stream ecology)
- Gonadectomy (see Gonads; Hormones)
- Gonads; Gonadectomy (see also Eggs; Genitalia; Hormones; Maturity; Ovary; Roe; Spawning; Spermatzoa; Testes)
J 32(1): 11 (thiourea effects on sexually maturing vs. gonadectomized male sockeye salmon)
- Goosefish (*Lophius americanus*) (monkfish)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Goosefish (*Lophius piscatorius*)
J 32(10): 1805 (in Gulf of Maine deep basins)
- Gordon, Donald Collingwood, Jr.
T 481 (improved sampling & analysis for estimating petroleum hydrocarbons in seawater by fluorescence spectroscopy)
S 2065 (fluorescent spectroscopic estimates of present petroleum hydrocarbon contamination in NW Atl. Ocean)
- Gosline, William A.
J 32(8): 1503 (obituary of Albert Lewis Tester)
- Grading (see Color; Quality of fishery products; Size)

Graham, Bryan William

- T 486 (chemical degradation & fish toxicity of a synthetic phosphate lubricant)
 546; 556(1); 556(2) (chemistry, mineralogy, & transport rates of sediments in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)

Grainger, Edward Henry

- S 2054 (nutrients in S Beaufort Sea)

Grampus griseus (see Dolphin, Risso's)

Grand Bank, off Nfld. (see also Newfoundland)

- J 32(8): 1383 (changes in abundance & biology of American plaice)

Grasses (see Cordgrass, marsh; Eelgrass)

Gratzek, John Bernard

- J 32(11): 2025 (nitrification in an aquatic recirculating system)
 (11): 2033 (parasiticide effects on nitrification in an aquatic recirculating system)

Gravel (see Spawning)

Grayling, Arctic (*Thymallus arcticus*)

- J 32(5): 689 (movements & growth in a small arctic stream, Alaska)
 T 547 (taken at a highway crossing of a Mackenzie R. tributary, N.W.T.)

Grazing (see also Zooplankton)

- S 2081 (limpets & chitons on kelp)

Great Bear Lake, N.W.T. (see also Mackenzie River and drainage system)

- J 32(11): 1971 (physical & chemical characteristics)
 (11): 1989 (fish species distribution re zooplankton, benthic invertebrates, & environmental conditions)

Great Central Lake, Vancouver Island, B.C.

- T 567 (notes on ecology of cutthroat trout: feed, length, age, etc.)

Great Slave Lake, N.W.T. (see Mackenzie River and drainage system)

Great Lakes, Laurentian (Canada and USA) (see Erie, Lake; Huron, Lake; Ontario, Lake; Superior, Lake)

Green, Roger Harrison

- J 32(8): 1297 (Hg uptake by freshwater clams)

Greenberg, Anne J.

- S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues of dolphins, porpoises, & toothed whales)

Greeneye, shortnose (*Chlorophthalmus agassizi*)

- J 32(10): 1805 (in Gulf of Maine deep-water basins)

Greenland

- J 32(7): 1079 (occurrence & exploitation of smaller cetaceans)
 (7): 1223 (incidental catches of harbor porpoise in salmon driftnets)

Grenadiers (Macrouridae)

- T 526 (current status of stocks & recent annual catches of "roundnose," in ICNAF areas)

Grey (see Gray)

Griffioen, Ward

- T 501 (winter starvation & feeding of cultured young coho salmon)
 541 (preliminary rearing of Pac. salmon in sea pens)

Griffiths, Robert P.

- J 32(10): 1876 (nature of incorporated ¹⁴C-labelled material retained by H₂SO₄-fixed bacteria in pure cultures & natural aquatic populations)

Grift, Norbert

- S 2025 (GLC determination of fenitrothion insecticide in fish, water, & sediment)
 2076 (biochemical & residue studies on rainbow trout after field & laboratory exposures to fenitrothion)

Grilse (see name of mature fish, e.g. Salmon; Trout)

Groot, Cornelis

- J 32(2): 233 (ultrasonic tracking of sockeye salmon in Skeena R. estuary, B.C.)
 (5): 633 (chum salmon & rainbow trout spawning behavior)

Groundfish (see also names of species, e.g., Flounder; Halibut; *Sebastes*; Sole)

- T 497 (survey & catches, Sept. 1974, Queen Charlotte Sound area, B.C. (data record))
 526 (1975 current status of Atl. offshore stocks & fisheries in ICNAF areas)
 542 (catch & effort statistics of B.C. commercial fishery, 1974 data record)

Growth (see also Age; Aquaculture; Bioenergetics; Diet; Feed; Length; Maturity; Size; Weight) (Note: Many incidental references to growth of organisms are not shown below; see also names of organisms)

- J 32(1): 33 (re optimal swimming speed & metabolism of a pelagic fish (bleak))
 (1): 43 (spiny dogfish, B.C.)
 (1): 88 (time-growth re hybridization in *Lepomis* sunfishes)
 (2): 289 (rate & period of Greenland halibut, from otoliths)
 (3): 397 (effect of combinations of light intensity & temperature on young rainbow trout)
 (3): 407 (annual rates of mooneye, Assiniboine R., Man.)

- (3): 427 (rates re dynamics of exploited lake whitefish populations & their management, particularly in N.W.T.)
- (5): 587 (of estuarine young Atl. menhaden re feed habits)
- (5): 593 (toxaphene insecticide effects on fathead minnow)
- (5): 609 (toxaphene effects on brook trout)
- (5): 615 (season effects on Atl. coast eelgrass)
- (5): 689 (Arctic grayling & young Arctic char in a small Alaskan arctic stream)
- (7): 1041 (narwhal, in E Canadian waters)
- (8): 1347 (mackerel in Nfld. waters)
- (8): 1359 (wild brook trout in stream population during removal of nontrout species)
- (8): 1383 (American plaice of Grand Bank, off Nfld.)
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- (10): 1867(F) (of channel catfish re age as determined by spiny rays of fins vs. tagging)
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- (11): 2103 (rate of young sockeye salmon re fish size & ration level)
- (11): 2169 (petrale sole off Washington & SW Vancouver Is.)
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- (12): 2433 (*Pacifastacus leniusculus* crayfish in subalpine L. Tahoe, Calif.)
- (12): 2487 (effect from borate pollution on marine phytoplankters in culture)
- T 500 (blue mussel as cultured in St. Margaret's Bay & Bedford Basin, N.S.; also growth re condition index)
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- Gulf Islands, off SE coast of Vancouver Island, B.C.
- MSP 26 (illustrations of seashore organisms & map of islands & marine parks (folder))
- Gull, herring (*Larus argentatus*)
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- Halliday, Ralph Gilmore
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- Henderson, Eugene Blair

- J 32(10): 1813 (effect of dietary sodium chloride on Atl. salmon growth)
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- Herring, Atlantic (*Clupea harengus harengus*)
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- Hettler, William F.
 J 32(10): 1767 (mercury & iron uptake by quahog clam mantle cells)
- Heyraud, Mireille
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 T 547 (re highway crossings of Mackenzie R. (N.W.T.) tributaries)
- Hiltunen, Jari
 J 32(12): 2584 (review of book on lacustrine benthic ecology)
- Hiltz, Doris Fraser
 J 32(8): 1329 (metabolic fate of injected pyruvate in fresh & ice-stored scallop muscle meats)
 (8): 1450 (preheat treatment for improving frozen storage stability of silver hake fillets & minced flesh)
- Hines, James Alexander
 J 32(6): 775 (protein instability in frozen-stored minced flesh of several commercial Canadian Atl. marine fishes)
 S 2037 (enzymic reactions of adenine derivatives in lobster tail muscle)
- Hingley, Joyce
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- Hinton, David Earle
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- Hirtle, Wanda Anne
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 (7): (various articles in this special issue on biology & fisheries of smaller cetaceans deal with history of the fisheries of many countries)
 (8): 1369 (revised interpretation of Skeena R., B.C., sockeye salmon catches)
 (8): 1465 (perspective re 75 years of Fisheries Research Board of Canada's achievements; with appendix (1488) on history of its establishments)
 (10): 1745 (historical changes in mercury contamination in Michigan walleyes)
 (10): 1887 (re development and management of Canada's shelf-seas fisheries)
- Hodson, Peter Vernon
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 (12): 2552 (Atl. salmon Zn uptake re temperature)
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 S 2053 (bowhead & white whales distribution in E Beaufort Sea)
- Hoffman, Ronald Steven
 J 32(5): 713 (water temperature & housing conditions effects on lobster aggressive behavior)
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- Holberg Inlet, Vancouver Island, B.C.
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 J 32(9): 1553 (water temperature re *Flexibacter columnaris* infection in steelhead trout, coho & chinook salmon)
- Holub, Bruce John
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- Hoos, Richard Alan William
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 (10): 1843 (temperature re hypercaldyonism in ecysterone-injected American lobsters)
 (12): 2556 (toxicity of naturally occurring insect juvenile hormone analogs (juvabione derivatives) to young rainbow trout)
 A 324 (effects of metal derivatives on functions (review))
- Horn, Henry S.
 J 32(11): 2285 (review of book on principles & methods of population & community ecology)
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- Hotham Sound, B.C.
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- Hotton, C.
 CHN 50 (separation of flesh & bones from fish)
- Houde, Edward Donald
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- Housing (see Habitat)
- Howard, Terence Edward
 J 32(6): 789 (swimming stamina of young coho salmon exposed to pulp mill effluent)
- Howe Sound, B.C. (see Inlets)

- Hudson Bay (see James Bay watershed hydroelectric project)
- Huggett, Robert
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- Humic substances
J 32(10): 1755 (re heavy-metal binding components of river waters near Ottawa, Ont.)
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- Hunger (see Diet; Feed; Predation)
- Hunn, Joseph Bruce
J 32(10): 1873 (coho salmon renal excretion after acute exposure to TFM lampricide)
- Huron, Lake
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(8): 1455 (toxicity of a larval lampricide to selected benthic macroinvertebrates)
- Hurst, Robert Edward
S 2006 (collecting & concentrating headspace volatiles for gas-chromatographic analysis)
- Hutzing, Otto
S 2038 (determining pentachlorophenol & chlorobiphenyls in biological samples)
- Hybrids; Hybridization
J 32(1): 88 (in sunfishes (*Lepomis*) based on time-growth & static allometry)
- Hydrocarbons (see also Hydrocarbons, halogenated; Oils, petroleum)
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S 2010 (microbial oxidation of methane in lake water)
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2065 (estimating by fluorescent spectroscopy the present state of contamination by, in NW Atl. water columns between N.S. & Bermuda; also sampling precautions)
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- Hydrocarbons, halogenated (see also Chlordane; DDT; Dieldrin; Insecticides; Perchloro derivatives; Pesticides; Polychlorinated biphenyls)
J 32(11): 2205 (in cetaceans blubber)
(12): 2391 (chlorinated, in California sea lion tissues)
T 491 (chlorinated paraffins: properties, uses, & pollution potential)
- Hydrodynamics
B 190 (& energetics of fish propulsion (has its own index; individual fishes & marine mammals not separately indexed in present index))
S 2085 (some features of turbulent diffusion of waters from a continuous source at sea)
- Hydroelectric projects (see also Power plants; Reservoirs)
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(1): 101 (characteristics of 3 Saskatchewan R. reservoirs & a proposed Churchill R. impoundment, in Sask.)
(1): 106 (Nelson R., Churchill R., & L. Winnipeg, in N. Man.)
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(1): 126 (ecological consequences of proposed Moran Dam on Fraser R., B.C.)
(1): 136 (various Que. river systems draining into James Bay)
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(1): 171 (impact of Bennett Dam (B.C.) on Peace & Athabaska rivers delta (Alta.) & on L. Athabaska (Alta. & Sask.))
(1): 177 (interdisciplinary approach to development of watershed simulation models (e.g. James Bay project, Que.))
(1): 196 (assessment of impact of hydro dams; table of details of some 90 reservoirs for power development, etc., in Canada)
(8): 1259 (freshwater fish eggs & young survival when pumped between 2 reservoirs (species not indexed separately herein))
(11): 2285 (symposium on fisheries re energy production (book review))
T 527; 528; 529; 530 (effects on reproduction, development, & population dynamics of lake whitefish; northern pike; yellow walleye; lake trout (literature reviews & bibliographies))
- Hydrogen ion concentration (see pH)
- Hydrogen sulfide (see Sulfur derivatives)
- Hydrogenation
S 2088 (review of partially hydrogenated marine oils re human nutrition)
- Hydrolagus coliei* (see Ratfish)
- Hydrozoa
T 492 (survey of B.C. medusae)
- Hynes, Hugh Bernard Noel
J 32(8): 1501 (review of book on pollution ecology of freshwater invertebrates)
- Hyperecdysonism (see Molting)

Hyperidiidae (see Amphipoda)

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J 32(11): 2039 (re quality of capelin stored in ice)

Hypoxia (see also Oxygen, dissolved; Respiration)

J 32(12): 2295 (minimal dissolved oxygen requirements & tolerances, of Canadian aquatic life (review))

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Ice; Icing (see also Quality of fishery products; Refrigeration; Sea water, refrigerated; Winterkill)

J 32(8): 1329 (metabolism of pyruvate in ice-stored scallop meat)

(11): 2039, 2047 (vs. refrigerated sea water for storing inshore male capelin)

T 536; 569 (of B.C. herring at sea, re quality of roe therefrom)

560 (cover effect on light penetration for primary productivity in lakes, also apparatus for determining)

ICNAF (see International Commission for the Northwest Atlantic Fisheries)

Ictalurus brunneus (see Bullhead, snail)

melas (see Bullhead, black)

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J 32(1): 29 (of an *Anisakis* nematode larva as *A. simplex*)

(9): 1640 (of *Ceratomyxa shasta* myxosporidian spores)

(12): 2399 (of 31 species of larval *Sebastes* of NE Pac.)

Iles, Thomas Derrick

J 32(3): 449 (review of book on management of marine fisheries)

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J 32(11): 2189 (excretion rates of marine zooplankton re phytoplankton concentration)

Illex illecebrosus (see Squid, short-finned)

Illumination (see also Diel habits; Light, reactions to; Moonlight; Radiation)

J 32(10): 1884 (infrared, for registering locomotor activity patterns of aquatic organisms)

Immunology (see also Antibody; Disease; Infection; Viruses)

J 32(9): 1674 (review of book on fish immunology)

Imol (see Lubricants)

Impoundment (see Dams; Hydroelectric projects; Keowee, Lake; Pen, fish; Reservoirs)

Inconnu (*Stenodus leucichthys*)

J 32(2): 295 (cytotaxonomy of, re that of lake whitefish)

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J 31 2003-2165 (index to, & list of titles in that 1974 volume & for certain associated publications (issued in 1975 as a separate))

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191: 367-382 (computation & interpretation of biological statistics of fish populations)

T 504; 566 (1000-reference bibliographies of Canadian freshwater bodies by provinces & territories)

505 (index to, & list of titles of publications by staff of Freshwater Institute, Winnipeg; former Biological Station & Technological Unit, London (Ont.); & former Central Biological Station, Winnipeg; 1944-1973)

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Infauna (see Benthos)

Infection (see also Disease; Parasites; Pathogens; Pathology; Viruses)

J 32(12): 2429 (establishment of an asymptomatic carrier state reinfection cycle of enteric redmouth disease in rainbow trout)

Infectious pancreatic necrosis disease (see Viruses)

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J 32(3): 416 (for perfusion fixation of whole fish for electron microscopy)

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- J 32(9): 1561 (annual & long term variations of deep-water properties of following southern B.C. coastal: Bute, Howe (Sound), Indian (Arm), Jarvis, Knight, Narrows (Arm), Princess Louisa, Saanich, & Sechart)
- Insecta (see also Chironomidae; Coleoptera; Diptera; Ephemeroptera; Flies, Hemiptera; Insecticides; Mosquito; Odonata; Plecoptera; Simuliidae; Tipulidae; Trichoptera)
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- Insecticides (see Aroclor; DDT; Dieldrin; Fenitrothion; Pesticides; Phosphamidon; Polychlorinated biphenyls; Toxaphene; etc.)
- Inspection (see Quality of fishery products)
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- International commissions for Pacific Ocean fisheries
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(12): 2569 (international joint ventures in fishing & 200-mile economic zones)
A 320 (local impacts re oil & mineral research on high seas)
325 (re management of renewable offshore resources)
- International Pacific Halibut Commission
S 2060 (prefatory note on history & function)
- International Whaling Commission
J 32(7): entire issue (proceedings & papers of meeting of Subcommittee on Small Cetaceans, Montreal, April 1-11, 1974)
- Interrenal tissue
J 32(1): 11 (thiourea effects on, in sexually maturing vs. gonadectomized male sockeye salmon)
- Intestine
J 32(4): 563 (histopathology of channel catfish virus diseased)
- Inuit (Eskimo)
J 32(6): 795 (mercury in seals & terrestrial carnivores as principal food items)
- Invertebrates (aquatic) (not indexed specifically in many cases) (see also Bacteria; Benthos; Biomass; Feed; Identification; Insecta; Keys; Parasites; Phytoplankton; Plankton; Sediments; Species, new; Zooplankton; also classifications of, and common names)
J 32(8): 1501 (pollution ecology of freshwater (book review))
(10): 1799 (role in fish production in a new impoundment)
(11): 1989 (benthic, of Great Bear L., N.W.T., re fish species distribution)
(12): 2295 (review of oxygen requirements of freshwater & marine)
(12): 2585 (intertidal, of central California coast (review of manual on))
T 468; 476 (zonation of intertidal biomass & benthic data, Fraser R. estuary, B.C.)
492 (survey report on B.C. medusae)
547; 548; 549; 550; 551; 554; 557 (a series re effects of petroleum oil developments in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems; T 557 gives a detailed list by species & collecting stations for both systems)
572 (benthic macroinvertebrates of L. Superior)
A 327 (review of book on diseases & parasites of aquatic)
- Iodine derivatives
J 32(4): 523 (an iodophor as disinfectant against infectious pancreatic necrosis virus)
(9): 1643 (in lumpfish & menhaden meals)
T 561 (estimation & content of iodide in B.C. kelp over growing season)
- Iredale, David Gordon
T 574 (pilot plant application of processing improved formulated breaded product from flesh of mechanically deboned freshwater fish (e.g. white sucker), & judging of quality by taste panel)
- Ireland
J 32(7): 1101 (strandings of long-finned pilot whales, 1800-1973)
- Iron derivatives
J 32(9): 1643 (in lumpfish & menhaden meals)
(10): 1767 (uptake by mantle cells of quahog clams exposed to $HgCl_2$)
T 488 (literature review of mine effluents effects on aquatic ecosystems)
489 (literature review of Canadian textile industry effluents effect on aquatic organisms)
498 (analysis for, in feathers)
506 (distribution in submerged mine tailings plumes, Rupert & Holberg inlets, B.C.)

- 509 (variation of amount in B.C. kelp during growing season)
- 511 (ionic concentrations in SW Man. prairie pot-hole lakes)
- 547; 556(1); 556(2); (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- 555 (comparison of methods for determining in fresh water)
- S 2016(F) (accumulation of (ferric) in American lobster & shore crab gills)
- 2078 (re phosphate in lake nutrients)
- 2086 (in phytoplankton & 2 zooplankton species, St. Margaret's Bay, N.S.)
- A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Isopoda (see also Parasites)
- J 32(7): 1073 (parasitic in Franciscana dolphin)
- (8): 1455 (toxicity of a lampricide to freshwater *Asellus militaris*)
- T 557 (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- S 2055 (of arctic S Beaufort Sea zoobenthos)
- Isopsetta isolepis* (see Sole, butter)
- Isotopes, radioactive (see Radioactivity)
- Isozymes (see Enzymes)
- J**
- Jacobson, Janet
- J 32(8): 1289 (leucine aminonaphthylamidase localization in rainbow trout)
- James Bay watershed hydroelectric project, Que.
- J 32(1): 136 (role of environmental impact assessment re legal rights)
- (1): 177 (interdisciplinary approach to development of watershed simulation models)
- (1): 196 (table of details of proposed reservoirs on La Grand R. system for above project)
- Jangaard, Peter Michael
- B 186(F) (capelin: biology, distribution, exploitation, utilization, composition, etc. (French edition of 1974 English edition))
- CHN 55 (fish oils as source of pigments in trout & salmon feeds)
- A 323 (encyclopedia of food technology article on *Homarus* lobsters)
- Japan
- J 32(7): 995 (biological parameters from catches of ant-arctic minke whale at virginial population level)
- (7): 1069 (ecological aspects of *Stenella* dolphins)
- (7): 1111 (review of small-whale fishery)
- (7): 1229 (incidental catches of smaller cetaceans with salmon drift gillnet in NW Pac. fishing)
- Jassby, Alan Douglas
- T 523 (mathematical representation & prediction of phytoplankton productivity)
- Jaw (see also Teeth)
- S 2070; 2080 (chemical composition of fat in various whale, dolphin, & porpoise, re acoustical function)
- Jeffries, Harry Perry
- J 32(5): 587 (fatty acid composition of young Atl. menhaden gut contents as guide to their diet in 3 estuarine habitats)
- Jellyfishes
- T 492 (species list of B.C. medusae)
- Jervis Inlet, B.C. (see Inlets)
- Johnson, Byron Thomas
- J 32(3): 333 (biodegradation of organic phthalates in freshwater hydrosol)
- Johnson, Howard Ernest
- J 32(8): 1455 (comparative toxicity of a larval lampricide to selected Great Lakes benthic macroinvertebrates)
- Johnson, Lionel
- J 32(11): 1971 (physical & chemical characteristics of Great Bear L., N.W.T.)
- (11): 1989 (fish species distribution in Great Bear L., re zooplankton, benthic invertebrates, & environmental conditions)
- Johnston, Bruce Owen
- J 32(2): 227 (antioxidants for deterring deterioration of canned lake whitefish)
- Johnston, James R.
- S 2029 (arsenic determination in marine organisms)
- Jolicoeur, Pierre
- J 32(8): 1491 (some comments on linear regression in fishery research) (see also page 1494))
- Jonas, Richard Edmund Ernest
- T 514 (survey & characterization of commercial canned Pac. herring fillets with sauces)
- S 2056 (freshness of iced salmonids re lactic acid formation in muscle extracts)
- Jones, J. D.
- J 32(10): 1745 (historical changes in mercury contamination in Michigan walleyes)
- Jonkel, Charles Joseph
- J 32(11): 2111 (polychlorinated biphenyls in arctic & subarctic marine food chains)

Juan de Fuca Strait, B.C. & Washington

- J 32(9): 1561 (annual & longer term variations of deep-water properties; also for contiguous Haro Strait)
T 503 (Pac. herring survey, 1971)

Juvabione derivatives (see Hormones)

K

Kabata, Zbigniew

- B 192 (catalogue & synopsis of *Caligus* copepoda parasitic on fishes)
A 327 (review of book on parasites and diseases of fishes and aquatic invertebrates)

Kaczynski, Victor Walter

- J 32(8): 1419 (size selective predation on epibenthic prey by young chum salmon in Puget Sound, Wash.)

Kanamycin (see Antibiotics)

Kapel, Finn Outzen

- J 32(7): 1079 (occurrence & exploitation of smaller Ceteacea in Greenland)

Karl, David Michael

- J 32(5): 599 (adenosine triphosphate assay of soil & marine sediments)

Kato, D. A.

- J 32(2): 283 (spawning of lake & round whitefish in a Yukon lake & river)

Kavik River, Alaska

- J 32(5): 689 (movements & growth of Arctic grayling & young Arctic char)

Kawaratani, Robert K.

- J 32(9): 1637 (mortality of *Transennella tantilla* immature clams when buried under sediment)

Ke, Paul Jenn

- J 32(2): 297 (inhibition of FFA formation in cod liver by Javex brand sodium hypochlorite solution)
CHN 52 (proposed rancidity indexes for assessing frozen mackerel storage life)
53 (rapid rancidity development in skin of frozen mackerel)
S 2089 (utilization of barracudina as source of wax esters & proteins)

Keepability of fishery products (see Quality of fishery products; Rancidity; Refrigeration)

Keith, Robert Arthur

- J 32(9): 1595 (superchilling temperature re deteriorative changes in stored postrigor Atl. cod muscle)

Keizer, Paul David

- T 481 (improved sampling & analysis for estimating petroleum hydrocarbons in sea water by fluorescence spectroscopy)
485 (estimating hydrocarbon concentrations in sediments of a Nfld. bay)
S 2065 (fluorescence spectroscopic estimates of present petroleum hydrocarbon contamination in NW Atl. Ocean)

Kelly, Patrick Vincent Cyril

- J 32(5): 713 (water temperature & housing conditions effects on lobster aggressive behavior)

Kelly, T. M.

- J 32(10): 1745 (historical changes in mercury contamination in Michigan walleyes)

Kelp

- T 509 (elemental composition of *Nereocystis luetkeana* over its B.C. growing season)
561 (estimation of halogen content of *N. luetkeana* over its B.C. growing season)
568 (composition of nonmetallic inorganic components of *N. luetkeana* over its B.C. growing season; estimates of biomass of B.C.)
MSP 26 (drawing of *N. luetkeana* typical of Gulf Is. marine parks, B.C.)
S 2081 (biological interactions affecting intertidal populations of *Egregia laevigata*)

Kelsall, John P.

- T 498 (methods of analyzing feathers for elemental content)

Kelso, John Richard Murray

- J 32(8): 1409 (summer distribution of nearshore fish near a L. Ontario nuclear thermoelectric generating station)
S 2017 (organochlorine residues, Hg, Cu, & Cd in yellow perch, white & smallmouth bass, L. Erie, Ont.)

Kendall, Michael Welt

- J 32(8): 1459 (hepatic morphology & acid phosphatase localization in channel catfish)

Kennedy, William Alexander

- T 541 (preliminary rearing of Pac. salmon in sea pens)
543 (experimental salmon fish farm at Pacific Biological Station, Departure Bay, B.C.)

Keowee, Lake, South Carolina, USA (a new impoundment)

- J 32(10): 1799 (feed habits of fishes, re fish production)

Ketchen, Keith Stuart

- J 32(1): 43 (age & growth of dogfish in B.C. waters)

Ketola, Henry George

- J 32(3): 422 (amino acid supplementation of casein & soybean meal in diets of young Atl. salmon & rainbow trout)

Keys (for identification of organisms)

- J 32(2): 259 (Nearctic & Palaearctic males & pupae of *Heterotanytarsus* chironomids)
 (3): 367 (Nearctic & Palaearctic *Protanypus* chironomids)
 B 193 (Nearctic & Palaearctic adults & pupae of *Heterotrissocladius* chironomids)
 T 519 (laboratory, for *Corophidium* amphipod species, B.C.)
 S 2059 (*Helicometra* & related genera of Trematoda)
 2061 (N American genera & species of Brachypteri-nae (Plecoptera))

Kidney

- J 32(1): 92 (bacterial kidney disease (BKD) appearing concurrently with infectious pancreatic necrosis in hatchery rainbow & brook trout)
 (6): 775 (tissue of gadoid fishes (e.g. cod) cause of protein instability in minced fish flesh stored at -5 C)
 (9): 1640 (lesions in chum salmon from myxospo-ridian infection)
 (10): 1873 (coho salmon renal excretion after acute exposure to TFM lampricide)
 (11): 2224 (antibody identification & detection of *Corynebacterium* causing BKD in salmonids)
 (12): 2391 (cadmium residues in California sea lion)

King, Deborah

- J 32(11): 2061 (activation energy of aspartate transcar-bamylase from Atl. cod ovary)

King, Madonna Jean

- J 32(1): 78 (Cu, Zn, & total protein levels in plasma of spawning migratory sockeye salmon)

Kinneman, John

- S 2070 (bioacoustic melon & jaw lipids & habitat of a freshwater dolphin)

Klaverkamp, John Fredrick

- S 2009 (autonomic receptors in isolated rainbow trout vasculature)

Kling, Hedy Joanna

- T 512 (phytoplankton successions & species distri-bution in prairie ponds of Erickson-Elphin-stone district of SW Man.)
 513 (seasonal succession of phytoplankton in 7 lake basins of NW Ont. experimental lakes area fol-lowing artificial eutrophication)
 533 (experimental cropping of lakes: 3. Phyto-plankton & zooplankton)

Knight Inlet, B.C. (see Inlets)

Kogia breviceps (see Whale, pygmy sperm)
simus (see Whale, dwarf sperm)

Kohler, Allan Carl

- J 32(9): 1613 (stock biomass & temperature role in re-cruitment of S Gulf of St. Lawrence cod)

- T 490; 521 (eggs, larvae, & young of fishes from 1968 & 1969 Gulf of St. Lawrence plankton collections)

Kokanee (*Oncorhynchus nerka*) (landlocked sockeye salmon)

- J 32(6): 817 (effects of their decomposition on subal-pine stream ecology)
 S 2052 (starvation vs. feeding effects on scale circulus formation, scale nucleus size re egg size, fish length & weight, in young)

Kozicki, Vladimir Michael

- J 32(7): 985 (supplementary information on minke whale from Nfld. fishery)
 (7): 1019 (autumn stranding of a northern bottle-nose whale, Bay of Fundy, N.S.)

Kozloff, Eugene N.

- J 32(12): 2585 (review of manual on intertidal inverte-brates of central California coast)

Kraft pulpmill effluent (see Pulpmill effluents)

Krael, David Paul

- T 570 (physical oceanography of Bras d'Or Lakes, N.S., 1972-74)
 571 (physical oceanography of Miramichi R. estu-ary, N.B., Sept.-Oct. 1974)
 S 2085 (some features of turbulent diffusion from a continuous force at sea)

Kripps, Robert Stephen

- S 2087 (L-threonine diaminase feedback effects in a marine diatom & a cryptomonad)

Kushner, D. J.

- J 32(10): 1755 (heavy-metal binding components of river waters near Ottawa, Ont.)

Kwain, Wen-hwa

- J 32(3): 397 (light & temperature effects on rainbow trout early stages & meristic variation)
 (4): 493 (temperature effects on rainbow trout de-velopment & survival in acid waters)

Kwik, Judith Kiemkiok

- J 32(3): 341 (population dynamics of Cladocera in a beaver pond)

Kynard, Boyd

- J 32(2): 300 (galvanonarcosis for rainbow trout immobilization)

L

Labidesthes sicculus (see Silverside, brook)

Laboratories and Establishments

- J 32(8): 1488 (history of the principal establishments of the Fisheries Research Board of Canada to

- 1973) (*Note: Most of the above, plus more recent ones, now operate under Department of the Environment, Fisheries and Marine Service; for a list of these and their addresses see page 2600 of this Index*)
- Labrador, Nfld. (*see also* Newfoundland)
- J 32(1): 117, 196 (environmental impact assessment of Churchill Falls & River hydroelectric project)
- (2): 307 (Atl. salmon taken in sea in N)
- T 504; 566 (alphabetical lists of freshwater bodies, keyed to bibliographies of further 1000 references to Canadian limnology & fisheries)
- La Cloche Mountains lakes, Ont.
- J 32(3): 389 (midsummer crustacean zooplankton communities in acid-stressed)
- Lacroix, Guy
- J 32(12): 2373 (St. Lawrence estuarial surface waters penetration into deep-water layers of Saguenay fjord, Que.)
- Lactate; Lactic acid
- J 32(6): 753 (effects of acute exposure to pulp mill effluent on young coho salmon plasma lactate, during rest & exercise)
- S 2056 (correlation between freshness of iced salmonids & lactic acid formation in muscle extracts)
- Lafond, C. A.
- J 32(11): 2075 (deep-water exchanges in Bute Inlet, B.C.)
- La Grande River system, Que. (*see* James Bay watershed hydroelectric project)
- La Rosa, Jacques
- J 32(8): 1339 (relative importance of feed & water in ⁶⁵Zn accumulation by marine biota)
- Lagenodelphis hosei* (*see* Dolphin, Fraser's)
- Lagenorhynchus acutus* (*see* Dolphin, Atlantic white-sided)
- albirostris* (*see* Dolphin, white-beaked)
- australis* (*see* Dolphin, Peale's)
- cruciger* (*see* Dolphin, hourglass)
- obliquidens* (*see* Dolphin, Pacific white-sided)
- obscurus* (*see* Dolphin, dusky)
- LaHam, Quentin Nadime
- J 32(6): 803 (selenium toxicity in early life stages of zebra fish)
- Lake..... (*see* name of lake)
- Lakes (including many not indexed separately) (*see also* Limnology; *also* Erickson-Elphinstone District Lakes, Man.; Experimental Lakes Area, Ont.; Great Lakes; La Cloche Mountains Lakes, Ont.; *also* names of lakes given in headings for Canadian provinces and territories and some USA states)
- J 32(9): 1519 (simple prediction of development capacity based on lake trophic status)
- T 504; 566 (lists of Canadian, by provinces & territories, keyed to further 1000 references to limnology & fisheries (first 1000 references were in T 471 (1974))
- 546; 547 (many Yukon & western N.W.T., re oil pipeline & highway projects)
- Lakes, pothole (*see* Erickson-Elphinstone District Lakes, S.W. Man.)
- Lakes, saline (*see also* Bras d'Or Lakes (tidal) N.S.; Erickson-Elphinstone District Lakes, SW Man.)
- J 32(6): 809 (effects on fathead minnow embryos & sac fry, N Dak.)
- (9): 1589 (effects of goldfish predation on zooplankton in small)
- T 511 (geochemistry & nutrient regime of some SW Man. eutrophic prairie pothole)
- Lakes, tidal (*see* Bras d'Or Lakes, N.S.)
- Lall, Barbara Smith
- J 32(8): 1450 (preheat treatment for improving frozen storage stability of silver hake fillets & minced flesh)
- Lalli, Carol Marie
- S 2044 (*Clione limacina* mollusc assimilation, metabolism, & growth efficiency)
- Lamellibranchiata (*see* Pelecypoda)
- Laminaria* (*see* Kelp; Pheophyta)
- Lampetra japonica* (*see* Lamprey, Arctic)
- tridentatus* (*see* Lamprey, Pacific)
- Lamprey, Arctic (*Lampetra japonica*)
- T 547 (taken at a highway crossing of Mackenzie R. tributary, N.W.T.)
- Lamprey, Pacific (*Entosphenus tridentatus*) (*Lampetra tridentatus*)
- T 515 (purse-seine catches, Babine L., B.C., 1973 data record)
- Lamprey, sea (*Petromyzon marinus*)
- J 32(5): 623 (system stimulation of predation on lake trout)
- Lampreys
- J 32(9): 1663 (terminology of intervals & stages of development)
- Lampricide
- J 32(4): 515 (metabolism of a dichloronitrosalicylanilide (Bayer 73) in rainbow trout)

- (8): 1455 (comparative toxicity of a larval (trifluoromethylnitrophenol, TFM) to selected Great Lakes macroinvertebrates)
- (10): 1873 (coho salmon renal excretion after acute exposure to TFM)
- Lampsilis* (see Clams, freshwater)
- Lance, American sand (*Ammodytes americanus*)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
526; 36 (incidental to groundfish fishery in ICNAF areas)
- Lanceoli* (see Amphipoda)
- Land, Bernard
T 487 (literature review of toxicity of drilling fluid components to aquatic biological systems)
- Lander, Robert Harry
J 32(12): 2447 (determining natural mortality in northern fur seal)
- Landings, fishery (see Catches; Fisheries; Surveys; also names of International commissions and of commercial aquatic animals)
- Lanternfishes (Myctophidae)
T 490; 521 (immature stages of uncertain species in Gulf of St. Lawrence plankton collections, 1968; 1969)
- LaRock, Paul A.
J 32(5): 599 (adenosine triphosphate assay of soil & marine sediments)
- Larson, Kim William
J 32(1): 21 (speciation of a freshwater *Cottus* sculpin population in L. Washington, Wash.)
- Larus argentatus* (see Gull, herring)
- Larvae (see also name of adult organism; also Development (particularly J 32(6): 821))
J 32(9): 1663 (terminology of intervals & stages in fish development)
(12): 2399 (identification of 31 *Sebastes* species)
- Lasmigona* (see Clams, freshwater)
- Lateral line
J 32(12): 2441 (possible role of posterior, in brook trout obstacle entrainment)
- Latimer, David L.
J 32(12): 2495 (toxicity of residual chlorine in power plant cooling water to 2 copepods)
- Latitude effects (see Light, reactions of organisms to; Photosynthesis; Phytoplankton; Productivity, primary; Radiation, solar; Season effects)
- Lau, Yan Chee
T 514 (survey & characterization of commercial canned B.C. herring fillets with sauces)
575 (quality & quantity of deboned flesh recovered from various B.C. underutilized marine fishes)
- Launce (see Lance)
- Laurentian Great Lakes (see Great Lakes)
- Law (see also names of International commissions; Management; Regulations)
J 32(1): 136 (re legal rights of James Bay (Que.) hydroelectric project in respect to Indian claims)
(9): 1671 (review of book on freedom of oceanic research re International Law of the Sea)
- Law of the Sea (see International Law of the Sea)
- Lawrence, Michael
T 502 (whitefish & rainbow trout behavioral responses to drilling fluids)
- Laycock, Rosemary Anitra
S 2045 (bacteria associated with *Laminaria* seaweed fronds)
- Leach, John Malcolm
J 32(8): 1249 (isolation & identification of pulp mill bleach effluents constituents toxic to rainbow trout)
(12): 2556 (toxicity of insect juvenile hormones to young rainbow trout)
- Lead and derivatives
J 32(9): 1643 (in lumpfish & menhaden meals)
(10): 1755 (re heavy-metal binding components of river waters near Ottawa, Ont.)
T 488 (literature review of mine effluents effects on aquatic ecosystems)
489 (literature review of Canadian textile industry effluent effects on aquatic organisms)
509 (variation of amount in B.C. kelp during growing season)
531 (in Atl. sea cucumber meal)
555 (comparison of methods of determining in fresh water)
556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
A 324 (environmental pollutant potential & toxicity re biological uptake (review))
- Lear, William Henry
J 32(2): 289 (otolith age validation of Greenland halibut)
(7): 1223 (by-fishery of harbor porpoise in salmon driftnets at W Greenland, 1972)
(12): 2343 (evaluation of transplants of Pac. pink salmon from B.C. to Nfld.)

Learning response

- J 32(5): 661 (DDT insecticide & M.S. 222 anesthetic effect on conditioned, in rainbow trout)

Leaves (see also Forestry)

- T 562 (importance of leaf litter to aquatic insect forms in salmonid stream feed)

Lech, John James

- J 32(4): 515 (metabolism of a salicylanilide lampricide (Bayer 73) in rainbow trout)

Lecithin

- J 32(9): 1633 (biosynthesis by cholinephosphotransferase pathway in rainbow trout liver microsomes)

Leduc, Gérard

- J 32(11): 2214 (yellow perch fat content seasonal changes in 2 Que. lakes)

Lee, Richard Fayao

- S 2068 (wax ester production by a marine cryptomonad culture)

Leek, Steve

- J 32(9): 1648 (a fungal plant saprophyte, *Phoma herbarum*, as a fish pathogen)

Legality (see Law; Management; Regulations)

Legendre, Rosaire

- CHN 50 (separation of flesh & bones from fish)
A 328 (functional & nutritive food proteins from fish)

Leggett, William Claude

- J 32(5): 653 (meristic differences & homing in American shad populations)
(10): 1785 (yellow perch biomass re phytoplankton & benthic biomass)

Lemon, D. W.

- CHN 51 (improved thiobarbituric acid test for fish rancidity)

Length (see also Age; Growth; Size; Weight)

- J 32(1): 43 (B.C. spiny dogfish re age)
(4): 479 (American plaice re trematode parasite incidence)
(8): 1347 (Atl. mackerel at sexual maturity)
(8): 1383 (American plaice at sexual maturity)
(10): 1852 (re mathematical model for appraising uptake & retention of contaminants by fish)
(10): 1860 (of zooplankton prey re bluegill response to dorsal light)
(12): 2453 (pleomerism: relation of fish maximum body length to vertebral number, & its significance in fish taxonomy & biology)
T 496; 503 (distribution of Pac. herring & spiny dogfish caught during B.C. herring surveys, SW off-shore Vancouver Is., 1972 & 1973; Juan de Fuca Strait, 1971)

- 565 (re age of 25 *Sebastes* & one *Sebastolobus* species of rockfishes caught at various localities & latitudes in NE Pac. ocean)

- 567 (cutthroat trout, Great Central L., Vancouver Is.)

Lepidopsetta bilineata (see Sole, rock)*Lepomis auritus* (see Sunfish, redbreast)

cyaneus (see Sunfish, green)

gibbosus (see Pumpkinseed)

gulosus (see Warmouth)

Lesions (see also Tumors)

- J 32(9): 1640 (in chum salmon kidney from infection by *Ceratomyxa shasta* myxosporidian)
(11): 2065 (proliferative tumorlike, on lake whitefish bone)

Lethal limits (see Insecticides; Pesticides; Pollution; Survival; Toxicants; also factors influencing, e.g. Oxygen, dissolved; Respiration; Salinity; Temperature)

Lett, Patrick Fraser

- J 32(5): 623 (system simulation of sea lamprey predation on lake trout)
(9): 1613 (role of stock biomass & temperature in recruitment of S Gulf of St. Lawrence cod)

Letters (to this Journal)

- J 32(8): 1491 (some comments on linear regressions in fishery research)
(8): 1494 (note concerning above letter)

Leucine (see also Acids, amino)

- J 32(8): 1289 (leucine aminonaphthylamidase in rainbow trout, re fish pathobiology diagnostic value)

Levings, Colin David

- J 32(11): 2268 (a prognosis for Canadian benthic oceanography)
T 468 (zonation of intertidal biomass & related benthic data from 2 banks off Fraser R. estuary, B.C.)
476 (macroinvertebrate communities distribution on a mud flat influenced by sewage, Fraser R. estuary)
S 2063 (winter flounder seasonal changes in feeding & particle selection)

Lewis, R. E.

- S 2085 (some features of turbulent diffusion from a continuous source at sea)

Li, Ming Fang

- S 2073 ($HgCl_2$ effect on morphology & acid phosphatase of tissue cells cultivated in suspension)

Lied, Einar

- J 32(5): 699 (simple rapid technique for repeated blood sampling in rainbow trout)

Life history; Life cycle (*see also* aspects and stages of; *also* names of organisms)

- J 32(4): 461 (crustacean zooplankton in L. Superior outlet, 1971-72)
- (7): 891-945 (parameters of many species of smaller cetaceans, by species)
- (7): 1055 (parameters of bottlenose dolphin, Florida)
- (8): 1439 (observations on the Puget Sound rockfish)
- (8): 1447 (witch flounder of slope off Virginia coast, USA)
- (10): 1933 (review of book on early life history of fish)
- CNG 100 (Pac. herring in B.C. waters)
- T 483 (re movements of fish populations in Lymn Creek, Vancouver Is., 1971-72)
- S 2081 (*Egria laevigata* laminarian kelp)

Light, reactions of organisms to (*see also* Cover; Diel habits; Eye; Photosynthesis; Radiation)

- J 32(2): 271 (behavior responses of developing lobster larvae to changes of)
- (3): 397 (re embryonic development, early growth, & meristic variation in rainbow trout)
- (6): 785 (DDT effect on rainbow trout discrimination of intensity variations)
- (9): 1652 (brook trout & young Atl. salmon shade selection re water depth)
- (10): 1860 (dorsal response of bluegill, re length of planktonic prey)
- T 502 (re effects of drilling fluid effluent turbidity on fish behavior)
- 573 (photoperiod effect on CuSO₄ acute toxicity to rainbow trout)

Ligumia (*see* Clams, freshwater)

Limanda ferruginea (*see* Flounder, yellowtail)

Limnocalanus (*see* Calanoida)

Limnology (*see also* Benthos; Eutrophication; Lakes; Nutrients, aquatic; Ponds; Rivers; Sediments; *also* Erickson-Elphinstone District Lakes, Man.; Experimental Lakes Area, Ont.; La Cloche Mountains Lakes, Que.; *also* names of lakes and rivers)

- J 32(1): 97-209 (environmental impact assessment re hydroelectric projects in Canada (a series of 10 perspective articles))
- (3): 389 (midsummer crustacean zooplankton communities in acid-stressed lakes)
- (8): 1465 (as investigated by FRBC (summary))
- (9): 1519 (simple prediction of lake development capacity based on lake trophic status)
- (11): 1971, 1989 (Great Bear L., N.W.T.)
- (12): 2535 (design of a small-boat otter trawl for collecting benthos & epibenthos)
- (12): 2582 (introduction to tropical, of African inland waters (book review))
- T 504; 566 (1000 references to, keyed to alphabetical lists of Canadian freshwater bodies by provinces &

territories; first 1000 references were in T 471)(1974))

- 545; 546; 549; 550; 551; 556(1); 556(2); 557 (of various lakes, streams, & rivers of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems re petroleum oil & highway projects effects on environment & ecology)
- 558; 564 (Carnation Creek, Vancouver Is., B.C.)
- S 2008 (long-term acidification of George L., Ont., effect on fishes)
- 2078 (effects of P & N fertilization on a NW Ont. lake)

Limpets

- MSP 26 (drawing of *Collisella digitalis*, *C. scutum*, & *Notoacmea persona* of Gulf Islands marine parks, B.C.)
- S 2081 (grazing on kelp)

Lindsey, Casimir Charles

- J 32(12): 2453 (pleomerism significance among related fish species)

Lindsey, James Keith

- S 2062 (comparison of probability distribution)

Ling (*see* Burbot)

Lingcod (*Ophiodon elongatus*)

- T 542 (catches & effort in B.C. commercial groundfish fishery: 1974 data record)

Lingg, A. J.

- J 32(12): 2429 (asymptomatic carrier state infection of enteric redmouth disease in rainbow trout)

Linke, Barbara Ann

- CHN 53 (rapid rancidity development in skin of frozen mackerel)

Linkletter, Leslie Elizabeth

- T 482 (bibliography of Canadian Atl. coast estuary studies)

Lipases (*see* Enzymes; Lipids)

Lipids (*see also* Acids, fatty; Composition, chemical; Enzymes; Oils, fatty, & fats; Triglycerides; Wax esters; for phospholipids *see also* Enzymes; Phosphates, organic)

- J 32(1): 61 (biosynthetic pathways of glycerol-3-phosphate incorporation into rainbow trout liver)
- (4): 507 (fatty acids of, in Canadian capelin, 1972-73)
- (9): 1643 (content of lumpfish & menhaden, & meals therefrom; possible product from lumpfish after roe separation; fatty acids of)
- S 2041 (determining muscle content of, in whole fish, by electronics)
- 2069 (review of lipolytic enzymes)
- 2070; 2080 (composition in melon & jaw oils of whales, dolphins, & porpoises re their bioacoustics; also composition of blubber fat)

- 2088 (review of marine lipids & fatty acids in human nutrition)
- Lipotes vexillifer* (see Dolphin, white flag)
- Lissodelphis borealis* (see Dolphin, northern right whale)
peronii (see Dolphin, southern right whale)
- Lists of Canadian freshwater bodies
 T 504; 566 (keyed to 1000 references re limnology & fisheries by provinces & territories; first 1000 references were in T 471) (1974))
- Lists of organisms (not all indexed separately) (see also Fishes, lists of; Insecta; Invertebrates (aquatic); several other publications indexed herein under their subject contain their own index, as indicated in those entries)
 T 492 (B.C. medusae)
 547; 557 (species list of aquatic plants & animals, in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
- Lists of publications (see Bibliographies; Review papers; also lists following this index)
- Litchfield, Carter
 S 2070 (bioacoustic melon & jaw lipids & habitat of a freshwater dolphin)
 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues of dolphins, porpoises, & toothed whales)
- Lithium derivatives
 A 324 (toxicity)
- Litter (see Forestry; Leaves)
- Littorina* (see Periwinkles)
- Live capture
 J 32(7): 954 (of smaller cetaceans for public display in aquaria or oceanaria, or for scientific purposes)
 (7): 1191 (techniques for above types of capture)
 (7): 1197 (review of S California fishery for above)
 (7): 1213 (of killer whale for above purposes, B.C. & Washington)
- Liver; Liver oils
 J 32(1): 61 (biosynthetic pathways of glycerol-3-phosphate incorporation into lipids of, in rainbow trout)
 (2): 297 (FFA formation inhibition by Na hypochlorite solution (Javex) treatment of Atl. cod liver oil)
 (4): 563 (histopathology of channel catfish virus diseased)
 (6): 795 (Hg & methyl-Hg in seals & terrestrial carnivores used as food of Inuit & feed for their sledge dogs, at Holman, N.W.T.)
 (8): 1459 (hepatic morphology in channel catfish re acid phosphatase localization)
 (9): 1633 (lecithin biosynthesis by cholinephosphotransferase pathway in rainbow trout liver microsomes)
 S 2038 (pentachlorophenol in white shark, N.B.)
- Livingston, Robert J.
 J 32(10): 1884 (quantitative determination apparatus for registering locomotor activity patterns of aquatic organisms, using infrared light)
- Lobster, American (*Homarus americanus*)
 J 32(2): 271 (larval responses to changes in hydrostatic pressure & light)
 (2): 316 (differentiation of hydrocarbons & diesel oil contamination in cooked meat of (French abstract on J 32(8): 1505))
 (4): 541 (*Vibrio parahaemolyticus* pathogen found in only 2 of 62 samples of live, weak, or dead, & none in 46 samples of processed flesh, from Canadian Atl. coast)
 (5): 713 (water temperature & housing conditions effects on aggressiveness)
 (8): 1431 (cholesterol requirements of young)
 (10): 1843 (temperature re hypercaldyssonism in ec-dysterone-injected)
 (11): 2055 (chemosensory response in presence of copper & phosphamidon)
 (11): 2091 (genetic variation & structure of populations)
 (11): 2210 (observation on hatching & larval release process)
 (12): 2515 (modified traps to catch crabs but exclude lobsters)
 B 187(F) (N.B., N.S., & P.E.I. fishery: economic effects of regulations (French edition of 1974 English B187)
 T 532 (observations on effects of scallop drags on lobster bottoms near Pictou, N.S.)
 S 2012 (olfactory responses to solutions from prey species, to seawater extracts, & to chemical fractions of Atl. cod muscle; effects of antennule ablation)
 2016(F) (uptake & accumulation of ferric iron in gills)
 2029 (arsenic in tail muscle & hepatopancreas)
 2037 (adenine-derivative enzymic degradation of iced & cooked tail muscle)
 2046 (hepatopancreas extract in vitro hydroxylation of biphenyl component of PCB)
 A 323 (general biology, composition, food technology, & by-products; also transportation of live)
- Lobster pathogen (*Aerococcus viridans* (var.) *homari*, formerly *Gaffkya homari*, cause of lobster disease formerly called gaffkemia)
 J 32(5): 702 (resistance of red & snow crab to infection by)
- Lockhart, Wallace Lyle
 T 486 (chemical degradation & fish toxicity of a synthetic phosphate lubricant)
 S 2008 (long-term acidification of a lake & resulting effects on fishes)

- S 2025 (GLC determination of fenitrothion insecticide in fish, water, & sediment)
 2076 (biochemical & residue studies on rainbow trout after field & laboratory exposures to fenitrothion)
- Locomotion (see Activity; Swimming)
- Logging (see Forestry)
- Loligo opalescens* (see Squid, longfinned (Pacific))
peali (see Squid, longfinned (Atlantic))
- Lonsdale, Edward
 J 32(2): 300 (galvanonarcosis for rainbow trout immobilization)
- Lophius americanus* (see Goosefish)
piscatorius (see Goosefish)
- Loring, Douglas Howard
 S 2084 (Gulf of St. Lawrence surficial geology)
- Lorz, Harriet Van Arsdale
 J 32(8): 1442 (hyperiid amphipods distribution off Oregon coast)
- Lota lota* (see Burbot)
- Love, R. Malcolm
 J 32(12): 2333 (seasonal & environmental influences on various attributes of NE Atl. cod flesh as food)
- Lubricants (see also Drilling fluids)
 J 32(2): 292 (trace analysis for phenols in waters, from breakdown of)
 (4): 457 (analysis for tri-aryl phosphate ester (Imol S-140) in fish tissue & water)
 T 486 (chemical degradation & fish toxicity of Imol)
- Luciferin; Luciferase (see Bioluminescence)
- Luke, Donald McGregor
 T 499 (automatic monitor for detecting & recording passage of transmitter-fitted fish)
- Lulves, William J.
 J 32(3): 333 (biodegradation of organic phthalates in freshwater hydrosol)
- Lumpenus lumpretaeformis* (see Snakeblenny)
maculatus (see Shanny, daubed)
- Lumpfish (*Cyclopterus lumpus*)
 J 32(9): 1643 (utilization of wastes from roe separation; lipids, glue, meal)
 T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Lunatia* (see Snail, moon)
- Lunar cycle (see Moonlight)
- Lund, Richard E.
 J 32(12): 2379 (pH & temperature effect on aqueous NH₃ equilibrium)
- Lutz, Andrew
 J 32(8): 1297 (Hg uptake by freshwater clams)
- Lynn Creek, Vancouver Island, B.C.
 J 32(12): 2542 (seaward movement of sticklebacks & of young coho salmon re lunar cycle)
 T 483 (species life histories & movements of fish populations, 1971-72)
- Lyopsetta exilis* (see Sole, slender)
- M**
- M.S. 222 (see Anesthesia)
- MacCrimmon, Hugh Ross
 B 188(F): 1 (practice & promise of freshwater aquaculture in Canada (French edition of 1974 English edition))
- Macdonald, S.
 S 2050 (morpholine as olfactory stimulus in fish)
- Machniak, Kazimierz
 J 32(2): 303 (tadpole madtom & black bullhead buoyancy adjustment to water velocity)
 T 527; 528; 529; 530 (literature reviews of effects of hydroelectric developments on biology, reproduction, & population dynamics of northern fishes: lake whitefish; northern pike; yellow walleye; lake trout)
- Mackay, William Charles
 J 32(5): 661 (DDT & M.S. 222 effect on rainbow trout learning a conditioned response)
 (6): 785 (DDT effect on rainbow trout discriminating ability)
- MacKelvie, Robin Maxwell
 J 32(4): 523 (survival & destruction of infectious pancreatic necrosis (IPN) virus)
 (8): 1267 (survival & inactivation of IPN virus)
- Mackenzie River and drainage system, N.W.T. (Note: T 545-557 are a series on ecological studies of aquatic systems in this system and of the Porcupine R. drainage system (Yukon) re proposed pipeline & highway developments) (see also Great Bear Lake, N.W.T.)
 T 545 (sampling waters for assessment of 2 methods for determining low concentrations of suspended sediment)
 546; 556(1); 556(2) (chemistry, mineralogy, & transport rates of sediments in waters of Mackenzie R. & Porcupine R. systems, 1971-73)
 547 (ecological studies of aquatic organisms re sedimentation)

- 548; 549 (effect of experimental spills of Norman Wells crude petroleum oil on 3 delta lakes)
- 551 (effects of crude oil on colonization of artificial substrates by zoobenthos organisms)
- 552 (effects of Norman Wells crude oil on periphyton in selected lakes & rivers)
- 553 (nutrient enrichment studies in a delta lake, re possibilities for biodegradation of spilled crude oil)
- 554 (insect emergence patterns in an oil-polluted vs. an unpolluted lake in delta)
- 555 (trace metal determination methods for fresh water)
- 556(1); 556(2) (physical & chemical data for water & sediment, also transport rates of dissolved & suspended sediments)
- 557 (species list of aquatic plants & animals collected from watershed, 1971-73)
- S 2054; 2055 (effects of outflow into S Beaufort Sea on aquatic nutrients, primary productivity, & zoobenthos)
- 2074 (effect & fate of crude oil experimental spill on 2 delta lakes)
- Mackerel, Atlantic (*Scomber scombrus*)
- J 32(6): 775 (relative stability of minced flesh during storage at -5 C)
- (8): 1347 (migrations & biological characteristics in Nfld. waters)
- CHN 50 (separation of bone & minced flesh from headed & gutted)
- 52; 53 (storage life of frozen, re rancidity development in flesh & skin)
- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Maclean, John Robert
- S 2030 (melanin biosynthesis by *Aeromonas salmonicida* fish pathogen)
- MacNeill, Ian Bruce
- S 2064 (analysis of fish count data obtained using a digital echo-counting system)
- Macoma, bent (*Macoma nasuta*)
- MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Macrobenthos (see Benthos)
- Macroinvertebrates (see Benthos; Invertebrates (aquatic))
- Macrophytes (aquatic) (see Cordgrass, marsh; Eelgrass; Kelp; Wrack, bladder; also Algae; Seaweeds)
- Madtom, tadpole (*Noturus gyrinus*)
- J 32(2): 303 (adjustment of buoyancy to change in water velocity)
- Magnesium derivatives
- J 32(9): 1643 (in lumpfish & menhaden meals)
- T 498 (analysis for, in feathers)
- 509 (variation in B.C. kelp over growing season)
- 547; 556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- S 2086 (in phytoplankton & 2 zooplankton species, St. Margaret's Bay, N.S.)
- Magnin, Etienne
- J 32(10): 1867(F) (age determination re growth of channel catfish from spiny rays of dorsal & pectoral fins)
- Magnuson, John Joseph
- J 32(11): 2133 (social rank & size influence on bluegill thermoselection behavior)
- Maine, Gulf of
- J 32(10): 1805 (quantitative biological assessment of benthic fauna in deep basins)
- Majak, Walter
- S 2027 (chromatographic isolation of miserotoxin & detection of aliphatic nitro compounds)
- Major, Ronald D.
- J 32(4): 563 (histopathological changes in channel catfish infected with channel catfish virus disease)
- Maki, Alan Walter
- J 32(8): 1455 (comparative toxicity of a larval lampicide to selected Great Lakes benthic macroinvertebrates)
- Malacostraca (see subclassifications of, also Crab; Crabs; Crustacea; Lobster; Shrimp; Shrimps)
- Malaspina Strait, Strait of Georgia, B.C.
- A 324: 24 (re pulp mill effluent pollution of water & oysters)
- Malformation
- J 32(11): 2227 (& egg mortality as index of environmental toxicants effects on fish populations, e.g. carp)
- S 2008 (of George L., Ont., white suckers re long-term acidification of waters)
- Malic enzyme (see also Enzymes)
- J 32(11): 2091 (re genetic variation & structure of American lobster populations)
- S 2018 (NAD- & NADP-, in spermatozoa of man, bull, Atl. salmon, & cod)
- Mallotus villosus* (see Capelin)
- Mammals, aquatic (see also Dolphin; Dolphins; Manatee; Narwhal; Porpoise; Porpoises; Sea lion; Seal; Seals; Walrus; Whale; Whales)
- J 32(7): entire issue (review of biology & fisheries for smaller cetaceans)
- (8): 1465 (management of marine, as investigated by FRBC (summary))
- B 190 (hydrodynamics & energetics of whales, seals,

- dolphins, porpoises, & manatee propulsion (not indexed separately; see its indexes)
T 507 (research on Canadian arctic marine)
- Man (see also Food (for man))
S 2018 (malic enzymes in spermatozoa)
- Management (see also Ecology; Environment; Exploitation; Fisheries; Law; Limnology; Pollution; Regulations; also names of International commissions)
J 32(3): 427 (of exploited lake whitefish populations, especially in N.W.T.)
(3): 449 (of marine fisheries (review of book))
(7): 1041 (protection of narwhal in E Canadian waters)
(7): 1111 (Japanese small-whale fishery)
(8): 1465 (fisheries & marine mammal, as investigated by FRBC (summary))
(9): 1519 (capacity of a lake for cultural development)
(10): 1733 (W Lake Erie yellow walleye, re year-class strengths)
(10): 1777 (optimal harvest strategies for Skeena R., B.C., sockeye salmon)
(10): 1825 (analysis of commercial exploitation & maximum sustained yield in biologically & technologically interdependent fisheries)
(10): 1887 (perspective on science for Canada's shelf-seas fisheries)
(11): 2179 (new techniques & methodology for policy evaluation in ecological systems, e.g. Pac. salmon fisheries)
(12): 2569 (re international joint ventures in fishing & 200-mile economic zones)
(12): 2586 (optimum sustained yield as a concept in fisheries (review of a published symposium))
CHN 100 (B.C. herring fishery)
S 2023 (organizational impediments to effective environmental research)
2078 (re ecology & eutrophication of a lake)
A 325 (of marine offshore renewable resources)
- Manatee
B 190: 35 (swimming movements)
- Manganese derivatives
J 32(9): 1643 (in lumpfish & menhaden meals)
T 488 (literature review of mine effluents effects on aquatic ecosystems)
498 (analysis for, in feathers)
509 (variation of amount in B.C. kelp during growing season)
511 (ionic concentrations in SW Man. prairie pot-hole lakes)
547; 566(1); 566(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
555 (comparison of methods for determining in fresh water)
S 2086 (in phytoplankton & 2 zooplankton species, St. Margaret's Bay, N.S.)
A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Manitoba (Province (Man.), Canada) (see also Assiniboine River; Churchill River; Erickson-Elphinstone District Lakes; Nelson River; Winnipeg, Lake)
J 32(1): 196 (table of details of 9 reservoirs for hydro-electric projects)
T 504; 566 (alphabetical lists of freshwater bodies, keyed to bibliography of further 1000 references to Canadian limnology & fisheries)
- Manixanthin (see Pigments)
- Mann, Kenneth Henry
J 32(1): 83 (above-ground production of marsh cordgrass near N end of its range (N.S.))
(5): 615 (chemical changes during seasonal cycle of Canadian Atl. eelgrass)
(8): 1399 (sedimentation of organic matter in St. Margaret's Bay, N.S.)
- Mansfield, Arthur Walter
J 32(7): 1041 (narwhal in E Canadian waters)
T 507 (marine mammal research in Canadian arctic)
- Mantle organ (of molluscs)
J 32(10): 1767 (specificity of cells for uptake and metabolism of divalent metal cations, re detection of such uptake)
- Manuscript Report Series (Note: This is a series originated by the Fisheries Research Board of Canada. It is not indexed herein, but lists by authors and titles, by number, from No. 1317 to No. 2087, appeared in the following issues)
J 32(1): 214; (4): 577; (5): 724; (8): 1509; (9): 1678)
- Manville, J. F.
J 32(12): 2556 (toxicity of insect hormones to young rainbow trout)
- Manzer, Alison Rosemary
J 32(8): 1450 (preheat treatment for improving frozen storage stability of silver hake fillets & minced flesh)
- Margarine
CHN 54 (suitability of Pac. vs. Atl. herring oils for hydrogenating to)
- Margolis, Leo
J 32(1): 211 (review of book on control & treatment of parasites of freshwater fishes)
(9): 1640 (*Ceratomyxa shasta* myxosporidian disease in B.C. chum salmon)
B 192 (catalogue & synopsis of *Caligus* copepoda parasitic on fishes)
- Mariculture (see also Aquaculture)
T 500 (for observing growth, etc., of blue mussel)
538 (mooring technique for fish pens)
541; 543 (rearing Pac. salmon in floating sea pens)
544 (raft for 5 nets)

- Marking (*see also* Tagging)
J 32(7): 960, 1237 (smaller cetaceans using "Discovery" type whale marks)
- Marking, Leif Lester
J 32(6): 769 (pH effects on antimycin toxicity to fish)
- Markle, Douglas Frank
J 32(8): 1447 (young witch flounder on continental slope off Virginia, USA)
- Marliave, Jeffrey B.
J 32(10): 1687 (seasonal shifts in spawning site of black prickleback)
- Marlin-spike (*Nezumia bairdii*)
J 32(10): 1805 (in Gulf of Maine deep-water basins)
- Marr, John Cassidy
J 32(9): 1671 (review of book on freedom of oceanic research)
- Marshall, Kenneth Eric
T 505 (list & index of publications by staff of Freshwater Institute, Winnipeg, Man., Biological Station & Technological Unit, London, Ont., & Central Biological Station, Winnipeg, 1944-73)
- Martin, Jean-Louis Marceau
S 2016(F) (accumulation & histochemistry of Fe in gills of lobster & a shore crab)
2086 (some aspects of marine plankton biochemical & mineral composition)
- Martin, William Robert
J 32(7): 879(E & F) (foreword to that special issue on biology & fisheries for smaller cetaceans)
- Masaki, Yasuaki
J 32(7): 995 (antarctic minke whale biological parameters & virginal population level)
- Mason, Edgar Graham
J 32(8): 1431 (cholesterol requirements of young American lobster)
- Mason, John Christopher
J 32(12): 2542 (seaward movement of young coho salmon re lunar cycle in Lymn Creek, Vancouver Is., B.C.)
T 483 (fish species life histories & populations movements in Lymn Creek, Vancouver Is.)
562 (research problems in B.C. stream ecology)
- Matamek River system, Que.
J 32(12): 2530 (crustacean plankton communities & their variation with predation)
- Mate, Bruce R.
J 32(12): 2391 (Hg, Me-Hg, Cd, & chlorinated hydrocarbon residues in California sea lion)
- Mathematical treatment of data (*see also* Computer programming; Models, mathematical)
J 32(8): 1305 (spatial model for an exploited shellfish population)
(8): 1491, 1494 (correspondence re a 1973 article in this Journal about linear regressions in fishery research)
(11): 1943 (re gillnet selectivity)
(12): 2447 (determining natural mortality of northern fur seal)
(12): 2520 (statistical bias problem in on-site surveys)
(12): 2547 (analysis of threshold-induced bias in acoustic scattering cross-section estimates of individual fish)
B 190 (hydrodynamics & energetics of fish populations (has its own index))
191 (computation & interpretation of biological statistics of fish populations (has its own index))
T 467 (interpreting echo integrator results for density of fish populations)
493 (& computer program, for effects of environmental factors on biological phenomena)
539 (summary of theory & techniques of power spectral analysis)
S 2062 (comparison of probability distributions)
2064 (analysis of fish count data from digital echo-counting system)
2085 (re turbulent diffusion from a continuous source at sea)
- Matter, particulate (*see also* Feed; Production primary; Sediments)
J 32(8): 1419 (young chum salmon selective feeding)
S 2063 (particle selection by winter flounder)
- Matthews, J. B.
J 32(10): 1693 (seasonal water masses characteristics in Muir Inlet, Alaska, a fjord with tidewater glaciers)
- Maturity; Maturation (*see also* Gonads; Growth; Hormones; Size)
J 32(1): 11 (thiourea effects on sexually maturing vs. gonadectomized male sockeye salmon)
(1): 66 (maturation & spawning of S Gulf of St. Lawrence herring)
(8): 1347 (mackerel in Nfld. waters)
(8): 1383 (American plaice of Grand Bank, off Nfld.)
(12): 2399 (of 31 *Sebastes* species of NE Pac.)
S 2039 (re environment of harp seal)
2057 (sublethal effects of CdCl₂ on sexual, of brook trout)
- Mayer, Foster Lee, Jr.
J 32(5): 593 (toxaphene effects on fathead minnow growth & bone composition)
(5): 609 (toxaphene effects on brook trout growth & development)
- Mayflies (*see* Ephemeroptera)

- Mayzaud, P.
S 2086 (some aspects of marine plankton biochemical & mineral composition)
- McAllister, Donald Evan
J 32(2): 325 (review of book on the urohyal in fishes)
- McBride, John Raymond
J 32(1): 11 (thiourea effects on sexually maturing & gonadectomized male sockeye salmon)
(4): 554 (acute toxicity of kanamycin to steelhead trout)
- McCleave, James David
J 32(4): 559 (effect of dummy telemetry transmitters on Atl. salmon smolt behavior)
- McCracken, Francis Derwood
J 32(10): 1887 (perspective on science for Canada's shelf-seas fisheries)
- McCraren, Joseph P.
J 32(4): 563 (histopathological changes in channel catfish infected with channel catfish virus disease)
- McDonald, Jenda
T 515 (data record of purse-seine catches of sockeye salmon & other species at Babine L., B.C., 1973)
- McFarlane, Norman James
T 490; 521 (eggs, larvae, & young of fishes from 1968 & 1969 Gulf of St. Lawrence plankton collections)
- McLeay, Donald James
J 32(6): 753 (effects of exposure to pulpmill effluent on young coho salmon carbohydrate metabolism during rest & exercise)
(12): 2357 (sensitivity of young coho salmon blood cell counts to stress from exposure to pulpmill effluent & zinc)
(12): 2528 (effect of pulpmill effluent on survival of starved young coho salmon)
- McLeese, Donald Wilson
J 32(9): 1674 (review of book on chemoreception in marine organisms)
(11): 2055 (chemosensory response of American lobster in presence of copper & phosphamidon)
S 2012 (olfactory responses of lobster to extracts of prey species, & effects of antennule ablation)
- McNicholl, Patricia Gail
J 32(5): 661 (DDT & M.S. 222 effect on rainbow trout learning a conditioned response)
(6): 785 (DDT effect on rainbow trout discriminative ability)
- Mead, James Glen
J 32(7): 1155 (former net fisheries for bottlenose dolphin in NW Atl. Ocean)
- Meals
J 32(3): 422 (soybean, re trout fingerling diets)
(9): 1643 (composition of, from lumpfish wastes & menhaden)
T 509 (kelp, as soil conditioner & mineral supplement for animal feeds)
531 (sea cucumber, as possible substitute for Atl. herring meal in trout diets)
- Meat (see Flesh; Food; Muscle; also Crab; Lobster, American; Quality of fishery products; Scallop; Whale)
- Mediterranean Sea
J 32(7): 946 (dolphin catches)
- Medusae
T 492 (survey report on B.C. hydrozoan)
- Megaloptera
J 32(8): 1455 (toxicity of a larval lampricide to *Chaulioides*)
- Meganyctiphanes* (see Euphausiacea)
- Megaptera novaeangliae* (see Whale, humpback)
- Mehrle, Paul Martin
J 32(5): 593 (toxaphene effects on fathead minnow growth & bone composition)
(5): 609 (toxaphene effects on brook trout growth & development)
- Melanin
S 2030 (biosynthesis from tyrosine by *Aeromonas salmonicida* bacteria)
- Melanogrammus aeglefinus* (see Haddock)
- Melon tissue
S 2070; 2080 (chemical composition of fat in various whale, dolphin, & porpoise cranial, re acoustic function)
- Melvin, Gary
T 538 (experimental diets effects on rainbow trout growth in salt water)
- Memphremagog, Lake, Que. & Vt.
J 32(10): 1785 (yellow perch biomass responses to varying phytoplankton & benthic biomasses)
- Menhaden, Atlantic (*Brevoortia tyrannus*)
J 32(5): 587 (diets of juvenile, in 3 estuarine habitats, determined from fatty acid composition of gut contents)
(9): 1643 (composition of meal from)
- Menidia menidia* (see Silverside, Atlantic)
- Mercenaria mercenaria* (see Quahog)

Mercer, Malcolm Clarence

- J 32(7): 1145 (population models of long-finned pilot whale & annual production of short-finned squid based on their interaction at Nfld.)

Mercury and derivatives

- J 32(1): 43 (age estimation of B.C. spiny dogfish from content of)
 (6): 795 (Hg & CH₃-Hg in muscle & liver of seals, Arctic char, & caribou food of Inuit, & of sledge dogs & their feed, at Holman, N.W.T.)
 (8): 1297 (uptake of HgCl₂, C₆H₅-Hg, & CH₃-Hg by freshwater clams & distribution in their tissues)
 (9): 1643 (in lumpfish & menhaden meals)
 (10): 1745 (changes in content of, re long-preserved specimens vs. modern samples of Michigan walleyes)
 (10): 1755 (re heavy-metal binding components of river waters near Ottawa, Ont.)
 (10): 1767 (uptake by mantle cells of quahog clams exposed to HgCl₂)
 (10): 1852 (methodology for appraising in aquatic systems, re age, length, & weight of fish)
 (11): 2005, 2015 (effects of MeHgCl and HgCl₂ on rainbow trout fingerlings)
 (12): 2391 (Hg & Me-Hg residues in California sea lion tissues)
 T 488 (in effluents from Canadian metal mines)
 489 (in Canadian textile industry effluents)
 509 (variation of amount in B.C. kelp during growing season)
 S 2017 (in yellow perch, white & smallmouth bass, L. Eric)
 2020 (review of significance of Hg & CH₃-Hg re environment; toxicity; & of microdetermination methods for Hg & organomercury compounds in environmental materials)
 2073 (effect of HgCl₂ on cellular morphology & acid phosphatase of tissue spinner cells)
 A 324 (environmental pollutive potential & toxicity re biological uptake (review))

Meristic characters (see also Morphology (biological); Species, new)

- J 32(3): 397 (effect of combinations of light intensity & temperature on early growth of rainbow trout)
 (5): 653 (differences in spawning populations of American shad re genetics & homing to tributaries of Saint John R. N.B.)

Merluccius bilinearis (see Hake, silver)
productus (see Hake, Pacific)*Mesocyclops* (see Cyclopoida)

- Mesoplodon bidens* (see Whale, Sowerby's beaked)
bowdoini (see Whale, Andrews' beaked)
carlhubbsi (see Whale, Hubbs' beaked)
densirostris (see Whale, Blainville's beaked)
europaeus (see Whale, Gervais' beaked)
ginkgodens (see Whale, ginkgo-toothed beak)
grayi (see Whale, Gray's beaked)

- hectori* (see Whale, Hector's beaked)
layardii (see Whale, strap-toothed)
mirus (see Whale, True's beaked)
pacificus (see Whale, Longman's beaked)
stejnegeri (see Whale, Stejneger's beaked)

Messiah, Shoukry Naseef

- J 32(1): 66 (maturation & spawning of S Gulf of St. Lawrence herring)
 (4): 471 (discriminant function analysis of S Gulf of St. Lawrence spring & autumn herring populations)

Metabolism (see also Bioenergetics; Stress; Swimming; also metabolic functions, e.g. Digestion; Excretion; Respiration)

- J 32(2): 243 (of an amphipod re its trophic position in feed web of young salmonids)
 (4): 515 (of a dichloronitrosalicylanilide lampricide in rainbow trout)
 (6): 753 (effects of acute exposure to pulpmill effluent on young coho salmon carbohydrate)
 (8): 1329 (of pyruvate injected in fresh & ice-stored scallop muscle)
 (10): 1845 (apparent lack of DDT, by some cultured marine *Calanus* spp.)
 S 2040 (respiratory, of sea urchin re temperature)
 2044 (re *Clione limacina* pteropod growth efficiency)

Metal ions (see also Mineral constituents; Pollution; Tolerance; Toxicants; names of metallic elements)

- J 32(9): 1643 (in lumpfish & menhaden meals)
 (10): 1755 (heavy-metal binding components of river waters)
 T 488 (in mine effluents: effects on fishes & aquatic ecosystems (literature review; not all metals indexed separately in this index))
 498 (analysis method & computer program, for content in feathers)
 509 (in *Nereocystis luetkeana* kelp over growing season)
 556(1); 556(2) (daily transport rate in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
 A 324 (toxicities, distribution in environment, biological effects, bioaccumulation; etc. (review))

Methane (see Hydrocarbons)

Methodology

- J 32(10): 1852 (for appraising contaminants in aquatic systems)
 (11): 2179 (new techniques for policy evaluation in ecological systems, as applied to a case study of Pac. salmon fisheries)

Methylmercury (see Mercury)

Metner, Donald Albert

- S 2076 (biochemical & residue studies on rainbow trout after field & laboratory exposures to fenitrothion insecticide)

Metridia (see Calanoida)

- Meyerhoff, Roger D.
J 32(10): 1864 (acute toxicity of crude oil component benzene to young striped bass)
- Michalik, Paula
S 2029 (arsenic determination in marine organisms)
- Michigan State, USA
J 32(10): 1745 (long-term changes in Hg contamination in walleyes)
- Micromesistius poutassou* (see Whiting, blue)
- Micropterus coosae* (see Bass, redeye)
 dolomieu (see Bass, smallmouth)
 punctulatus (see Bass, spotted)
 salmoides (see Bass, largemouth)
- Microscopy (see Electron microscopy)
- Microsomes
J 32(9): 1633 (lecithin biosynthesis by cholinephosphotransferase of, in rainbow trout liver)
- Microstomus pacificus* (see Sole, Dover)
- Midges (see Chironomidae)
- Migration (see also Behavior; Biotelemetry; Distribution; Homing; Marking; Movements; Spawning; Swimming; Tagging; Tracking; Ultrasonics; also names of animals)
J 32(1): 78 (Cu, Zn, & total protein levels in plasma of spawning migratory sockeye salmon)
 (2): 233 (ultrasonic tracking of sockeye salmon entering Skeena R., B.C.)
 (7): 1005 (pygmy right whale in S African waters)
 (8): 1347 (& biological characteristics of Nfld. Atl. mackerel)
 (8): 1369 (history of dominance of runs, year-classes, etc., of sockeye salmon in Skeena R., B.C.)
CNG 100 (Pac. herring in B.C. waters)
S 2053 (bowhead & white whales, Beaufort Sea)
- Milk (polar bear)
J 32(11): 2111 (polychlorinated biphenyls & DDT in)
- Miller, Bruce Stuart
J 32(10): 1723 (epizootiology of tumors in a population of young English sole, Puget Sound, Wash.)
- Miller, Robert Joseph
J 32(6): 761 (photographic censusing spider crab, & calibration of effective area fished per trap)
- Mills, Eric Leonard
J 32(9): 1657 (perspective on benthic organisms & structure of marine organisms)
- Milt (see Spawning; Spermatozoa)
- Mine wastes and effluents (see also Drilling fluids; Flotation agents)
J 32(8): 1275 (arsenic dispersion in sea water, sediments, & biota, from a stibnite mine)
T 488 (metal mine effluents effects on Canadian aquatic ecosystems (review))
506 (chemical delineation of a submerged plume, Rupert & Holberg inlets, B.C.)
- Mineral constituents; Mineral content (see also Analysis methods (chemical); Composition, chemical; Metal ions; Mine wastes; Sediments; also names of organisms & chemical elements; for uptake from pollution, see Pollution, names of organisms & chemical elements)
T 545; 546; 547; 555; 556(1); 556(2) (of sediments and waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
561 (of kelp during growing season)
- Mineralogy (see also Geochemistry; Geology; Sediments)
T 546; 556(1); 556(2) (of sediments in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- Minnow, bluntnose (*Pimephales notatus*)
J 32(4): 485 (temperatures selected & avoided at various acclimation temperatures)
- Minnow, fathead (*Pimephales promelas*)
J 32(4): 485 (temperatures selected & avoided at various acclimation temperatures)
 (5): 593 (toxaphene insecticide effects on growth & bone composition)
 (6): 809 (saline lake water effects on embryo & sac fry survival)
- Minns, Charles Kenneth
J 32(8): 1409 (summer distribution of nearshore fish near a L. Ontario nuclear thermoelectric generating station)
- Minytrema melanops* (see Sucker, spotted)
- Miramichi River, N.B.
J 32(1): 1 (temperature re acute toxicity of Zn ion to Atl. salmon)
T 571 (physical oceanography of estuary)
- Miserotoxin
S 2027 (isolation & determination of, from timber milkvetch; also chromatographic spray method for detecting aliphatic nitro compounds)
- Misra, Ragendra Kumar
J 32(1): 88 (hybridization in sunfishes)
- Missouri River, USA (see Diversion of rivers)
- Mitchell, Edward Dick
J 32(7): 883(E & F) (preface to that special issue on biology & fisheries for smaller cetaceans, also special editor for the issue)

- (7): 985 (supplementary information on minke whale from Nfld. fishery)
 (7): 1019 (stranding of a northern bottlenose whale, Bay of Fundy, N.S.)
- Models, biological and ecological (*see also* next two headings)
 J 32(7): 1145 (modified Leslie-DeLury population models of long-finned pilot whale re short-finned squid, Nfld.)
 (11): 2163 (graphical methods for estimating parameters for a Schaefer model of a fishery)
 B 191 (re fish populations)
 T 523 (photosynthesis-light, regression, & biomass, re mathematical representation & prediction of phytoplankton productivity)
- Models, mathematical (*see also* preceding and following headings; *also* Computer programming; Mathematical treatment of data)
 J 32(8): 1305 (spatial, for an exploited shellfish population)
 (10): 1825 (analysis of commercial exploitation & maximum sustained yield in biologically & technologically interdependent fisheries)
 (10): 1852 (some methodology for appraising contaminants in aquatic systems)
 (12): 2365 (estimating fish survival rate from tags returned by anglers)
 T 493 (second-order orthogonal composite factorial designs, re effects of environmental factors on biological phenomena)
- Models, simulation (*see also* preceding two headings)
 J 32(1): 171, 177 (re environmental impact assessment of dams & reservoirs for hydroelectric projects in Canada)
 (5): 623 (re predatory activities of sea lampreys on lake trout)
- Moenig, J.
 T 550 (effects of Norman Wells (N.W.T.) crude oil experimental spill into a N Yukon stream on benthos of latter a year later)
- Moisture content (*see* Composition, chemical; Water content)
- Mollusca (*see also* Gastropoda; Pelecypoda; Pteropoda; *also* other subdivisions; *also* Bubble shell; Chiton; Clam; Clams; Cockle; Limpets; Mussel; Octopus; Oyster; Periwinkles; Quahog; Scallop; Shellfish; Snail, moon; Squid; etc.)
 J 32(5): 719 (review of book on)
- Molting; Ecdysis
 J 32(10): 1843 (temperature re hyperecdysionism in ecdysterone-injected American lobsters)
 (12): 2433 (frequency of a crayfish in subalpine L. Tahoe, Calif.)
 S 2036 (problem of the Y-organ re molting gland in decapod Crustacea)
- Molybdenum derivatives
 J 32(9): 1643 (in lumpfish & menhaden meals)
 A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Monkfish (*see* Goosefish)
- Monodon monoceros* (*see* Narwhal)
- Monogenea (*see* Trematoda)
- Moonlight
 J 32(12): 2542 (lunar cycle effect on seaward movement of young coho salmon)
- Mooneye (*Hiodon tergius*)
 J 32(3): 407 (annual growth rates in Assiniboine R., Man.)
- Moores, John Arthur
 J 32(8): 1347 (migrations & biology of Atl. mackerel in Nfld. waters)
- Mopalia* (*see* Chiton)
- Moran Dam, B.C. (*see* Dams)
- Morden, G. W.
 T 556(1); 556(2) (physical & chemical data for water & sediment, & transport rates of dissolved & suspended elements in Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- Morita, Richard Y.
 J 32(10): 1876 (nature of incorporated ¹⁴C-labelled material retained by H₂SO₄-fixed bacteria in pure cultures & natural aquatic populations)
- Morley, R. W.
 J 32(12): 2520 (severity of the problem of statistical bias in on-site surveys, & its potential for solution)
- Morone chrysops* (*see* Bass, white)
saxatilis (*see* Bass, striped)
- Morpholine
 S 2050 (as olfactory stimulus in fish)
- Morphology; Morphometry (biological) (*Note*: In many cases references to morphological data pertaining to organisms will be found under the names of the organism and of anatomical structures. *See also* Anatomy; Cytology; Histology; Length; Meristic characters; Size; Species, new; etc.)
 J 32(2): 259 (*Heterotanytarsus* chironomids)
 (3): 367 (*Protanypus* chironomids)
 (6): 821 (of fish embryos re proposed system of classification of fishes)
 (8): 1459 (channel catfish liver re acid phosphatase localization)
 B 193 (*Heterotrissocladius* chironomids)
 S 2043 (Chironomidae genitalia)

- Morphology; Morphometry (physical) (*see also* Geology; Glaciers; Limnology)
 J 32(11): 1971 (Great Bear L., N.W.T.)
 T 510 (Erickson-Elphinstone District prairie pothole lakes, SW Man.)
 S 2084 (surficial & submarine, of Gulf of St. Lawrence)
- Morrison, Carol Marianne
 S 2031 (ultrastructure of some pelecypod adductor muscles)
- Mortality (*see also* Disease; Pollution; Summerkill; Survival; Toxicants; Winterkill; *also* factors influencing, e.g. Oxygen, dissolved; Respiration; Salinity; Temperature; etc.)
 J 32(3): 397 (effect of combinations of light intensity & temperature on embryonic rainbow trout)
 (3): 427 (re dynamics of exploited lake whitefish populations & their management, particularly in N.W.T.)
 (7): 1095 (by stranding, re population abundance of smaller cetaceans in NE Atl.)
 (7): 1191, 1197 (of smaller cetaceans during live capture or when in aquaria or oceanaria for public display)
 (7): 1213 (of killer whales when used for public display)
 (8): 1305 (re spatial model for an exploited shellfish population, e.g. scallop)
 (8): 1383 (calculation of fishing, re American plaice of Grand Bank, off Nfld.)
 (9): 1553 (of trout & salmon infected by columnaris disease, re water temperature)
 (9): 1637 (of immature clams when left buried under sediment during clam digging)
 (10): 1870 (effects of brief temperature increases on larval coot clam)
 (11): 2214 (re female yellow perch reduced fat content in winter in 2 Que. lakes)
 (12): 2447 (determining natural, of northern fur seal, through births, commercial kills, sex, & age)
 B 191 (re biological statistics of fish populations (has its own index))
 T 500 (blue mussel in St. Margaret's Bay & Bedford Basin, N.S.)
- Mosquito (*Culex* and *Aedes* species) (*see also* Culicidae)
 T 557 (above & other species, in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
 S 2077 (field & laboratory studies of effect of exposure to fenitrothion pesticide)
- Moulting (*see* Molting)
- Moulton, Lawrence Laton
 J 32(8): 1439 (life history observations on the Puget Sound rockfish)
- Mounib, M. Said
 S 2018 (malic enzymes in mammal & fish spermatozoa)
- Movements (*see also* Activity; Behavior; Bioenergetics; Distribution; Flow; Migration; Schooling; Spawning; Swimming; Tagging; Tracking; Ultrasonics)
 J 32(2): 233 (tracking homing sockeye salmon ultrasonically when entering Skeena R. estuary, B.C.)
 (5): 689 (of Arctic grayling & young Arctic char in a small Alaskan arctic stream)
 (8): 1359 (of wild brook trout stream population during removal of nontrout species)
 (8): 1465 (of fish stocks as investigated by FRBC (summary))
 (11): 2169 (of spawning groups of petrale sole off Washington & SW Vancouver Is.)
 (12): 2542 (seaward, of sticklebacks, & lunar cycle re seaward of young coho salmon)
 T 483 (upstream & downstream of fish populations in Lynn Creek, Vancouver Is., 1971-72)
 499 (automatic monitoring of fish passing through channels, by ultrasonics)
- Moxostoma anisurum* (*see* Redhorse, silver)
robustum (*see* Redhorse, smallfin)
- Mud (*see also* Drilling fluids; Sediments)
 T 547 (effects of mud slide on Caribou Bar Creek, N.W.T.)
- Muir Inlet, Alaska
 J 32(10): 1693 (seasonal water masses characteristics in this fjord with tidewater glaciers)
- Mulinia lateralis* (*see* Clam, coot)
- Mulkins-Phillips, Gwenyth Jean
 S 2014 (effect of 4 dispersants on biodegradation & growth of bacteria on crude oil)
- Mummichog (*Fundulus heteroclitus*)
 J 32(1): 69 (Furanace antimicrobial effects on larvae)
 (6): 729 (attractiveness of natural baits & some chemicals to, in its natural habitat)
- Murchelano, Robert Adrian
 J 32(6): 739 (types of bacteria in sea water used in laboratory culture of American oyster)
- Murray, Derek A. J.
 J 32(2): 292 (trace analysis of phenols in water by gas chromatography (GC))
 (4): 457 (analysis & determination of tri-aryl phosphate esters in fish tissue & water by GC)
- Murray, P. D.
 J 32(2): 233 (ultrasonic tracking of sockeye salmon in Skeena R. estuary, B.C.)
- Muscle (*see also* Fillets; Flesh; Proteins; Quality of fishery products)
 J 32(2): 316 (fuel oil contamination in cooked lobster meat)
 (5): 807 (α -tocopherol in frozen Atl. herring)

- (8): 1329 (metabolic fate of injected pyruvate in scallop adductor)
 (9): 1595 (superchilling temperatures re deteriorative changes in stored postrigor Atl. cod)
 (11): 2015 (uptake of CH_3HgCl in young rainbow trout)
 (11): 2153 (acetylcholinesterase re neuromuscular function in largemouth bass pectoral abductor)
 S 2031 (adductor: ultrastructure in scallop, oyster, quahog, & astarte)
 2037 (lobster tail: enzymic degradation of nucleotides in iced & cooked)
 2041 (determining lipid content of, in whole fish, by electronics)
 2056 (freshness of iced salmonids re enzymatic lactic acid formation in muscle extracts)
- Mussel (a European)
 J 32(8): 1339 (feed vs. water re uptake & accumulation of ^{65}Zn by *Mytilus galloprovincialis*)
- Mussel, bay (Pacific) (*Mytilus edulis*)
 MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Mussel, blue (Atlantic) (*Mytilus edulis*)
 T 500 (growth, mortality, & seasonal cycle in cages submerged in 2 N.S. embayments)
 S 2046 (body tissue in vitro hydroxylation of biphenyl component of PCB)
- Mutagenesis (see Genetics)
- Mya arenaria* (see Clam, steamer)
- Myctophidae (see Lanternfishes)
- Myers, Michael J.
 J 32(10): 1880 (improved flowing water apparatus for larval crab culture)
- Mylocheilus caurinus* (see Peamouth)
- Myoxocephalus octodecemspinosus* (see Sculpin, longhorn)
polyacanthocephalus (see Sculpin, great)
quadricornis (see Sculpin, fourhorn)
scorpius (see Sculpin, shorthorn)
- Mysidacea
 J 32(11): 1989 (*Mysis relicta* distribution in Great Bear L., N.W.T.)
 T 557 (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- Mysis* (see Mysidacea)
- Mytilus edulis* (see Mussel, bay (Pacific); Mussel, blue (Atlantic))
galloprovincialis (see Mussel (a European))
- Myxine glutinosa* (see Hagfish)
- Myxosporidea (see also Disease; Parasites; Sporozoa)
- J 32(9): 1545 (ceratomyxosis disease from *Ceratomyxa shasta* in rainbow trout & coho salmon re water temperature)
 (9): 1640 (ceratomyxosis in B.C. chum salmon)
- N**
- Nakashima, Brian S.
 J 32(10): 1785 (yellow perch biomass re phytoplankton & benthic biomass)
- Nanaimo River, B.C.
 CNG 99 (biology aspects of steelhead trout, & fishery from 3 years of anglers' catches)
 T 537 (residence duration, population size, & growth of juvenile coho salmon in estuary)
- Narcosis (see Galvanonarcosis)
- Narrows Arm, B.C. (see Inlets)
- Narver, David Wells
 J 32(5): 667 (winter ecology aspects of young coho salmon & steelhead trout)
 (5): 681 (young coho salmon & cutthroat trout preferences re simulated alteration of winter habitat)
 CHN 99 (biology & fishery of Nanaimo R. steelhead trout from 3 years of anglers' catches)
 T 501 (winter starvation & feeding of cultured young coho salmon)
 562 (research problems in B.C. stream ecology)
 567 (cutthroat trout ecology, Great Central L., Vancouver Is.)
- Narwhal (*Monodon monoceros*)
 J 32(7): 905 (overview), 945, 946 (distribution), 955 (net fishery for scientific purposes), 1079 (occurrence & exploitation, Greenland); 1083 (fishery & biology, Norway), 1095 (stranding mortality re population abundance)
 (7): 1041 (biology, catches, management, E Canada waters)
 T 507 (past, present, & future research in Canadian arctic)
 S 2080 (comparative lipid patterns of acoustical & nonacoustical fatty tissues)
- Nash, D. M.
 CHN 52 (proposed rancidity indexes for assessing frozen mackerel storage life)
 53 (rapid rancidity development in skin of frozen mackerel)
- Nasser, Lake (Nasser Reservoir), Egypt
 J 32(11): 2137 (estimates of potential fish yield (e.g. *Tilapia nilotica*))

- Necrosis (for infectious pancreatic necrosis virus, see Viruses)
 J 32(11): 2005 (of rainbow trout gills caused by uptake of CH_3HgCl)
- Nelson, Keith
 J 32(11): 2091 (genetic variation & structure of American lobster populations)
- Nelson, Nancy C.
 J 32(4): 551 (statistical estimating of normal blood chemistry ranges & variance in a rainbow trout strain)
- Nelson River system, Man.
 J 32(1): 106, 196 (hydroelectric developments)
- Nematoda
 J 32(1): 29 (identification of an *Anisakis* larva as *A. simplex*)
 (7): 1073 (parasitic in Franciscana dolphin)
 (11): 2069 (*Sterliadochona tenuissima* common in Atl. salmon)
 T 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
 572 (in L. Superior)
- Nemetz, T. G.
 J 32(11): 2033 (parasiticides effects on nitrification in an aquatic recirculating system)
- Neohelicometa* (see Trematoda; also Species, new)
- Neophocaena phocaenoides* (see Porpoise, finless)
- Nereocystis luetkeana* (see Kelp)
- Nerve system
 J 32(12): 2441 (ablation of brook trout lateral line: possible effects on positioning in flow around bottom obstacles)
- Nets (see also Aquaculture; Gear; Mariculture; Pen, fish; Seine; Trawl)
 J 32(6): 865 (review of book on netting materials for fishing gear)
 (6): 866 (review of book on rigging & mending modern inshore fishing gear)
 (7): 952-958 (various types for capture of small cetaceans)
 (7): 1155 (former net fisheries for bottlenose dolphin in NW Atl.)
 (7): 1191, 1197, 1213 (use in live fishery for smaller cetaceans for public display or scientific purposes)
 (7): 1223 (incidental harbor porpoise catches in W Greenland salmon driftnets, 1972)
 (7): 1229 (incidental catch of smaller cetaceans in Japanese salmon drift gillnet, NW Pac.)
 (11): 1943 (review of gillnet selectivity)
 CNG 100 (used in B.C. Pac. herring fishery)
 S 2032 (gillnet catches of Atl. cod re trawling noise)
- Nevenzel, Judd C.
 S 2068 (wax ester production by a marine cryptomonad culture)
- New Brunswick (Province (N.B.) Canada) (see also Fundy, Bay of; Miramichi River; Passamaquoddy Bay; Saint John River; Trout Brook)
 T 504; 566 (alphabetical lists of freshwater bodies, keyed to bibliography of further 1000 references to Canadian limnology & fisheries)
- New species (see Species, new)
- Newfoundland (Province (Nfld.), Canada) (see also Comeby-Chance Bay; Grand Bank; Labrador; North Harbour River)
 J 32(1): 196 (table of details of several reservoirs for hydroelectric projects)
 (7): 985 (minke whale biology & catches)
 (7): 1145 (population models of long-finned pilot whale re short-finned squid annual production)
 (8): 1347 (migrations & biological characteristics of mackerel in waters)
 T 504; 566 (alphabetical lists of freshwater bodies, keyed to bibliography of further 1000 references to Canadian limnology & fisheries)
- Newsome, George E.
 J 32(11): 2214 (yellow perch fat content seasonal changes in 2 Que. lakes)
- Nezumia verrillii* (see Marlin-spike)
- Nichol, Clive William
 J 32(3): 404 (fecundity comparisons for various lake whitefish stocks)
- Nicholson, Bruce Lee
 J 32(8): 1437 (possible viral interference in isolation of IPN virus from carrier fish)
- Nicholson, Harold Frederick
 T 504; 566 (1000-reference bibliographies to Canadian freshwater limnology & fisheries, with alphabetical list of freshwater bodies by provinces & territories (No. 2; 3;)) [No. 1 is T 471 in 1974]
 525 (chlorophyll & primary production in L. Superior, May-Nov. 1973)
- Nickel derivatives
 T 488 (literature review of mine effluent effects on aquatic ecosystems)
 498 (analysis for, in feathers)
 A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Niimi, Arthur John
 J 32(6): 803 (selenium toxicity in early life stages of zebra fish)
- Nilsson, Kristina
 J 32(9): 1633 (lecithin biosynthesis pathway in rainbow trout liver microsomes)

- Nishiaki, Masaharu
J 32(7): 1069 (ecological aspects of smaller cetaceans, particularly striped dolphin)
- Nitrate (for general data re content in natural waters see also Limnology; Nutrients, aquatic; Oceanography; Phytoplankton; Production, primary)
J 32(1): 72 (inhibition of primary production from competition for, between phytoplanktonic vs. heterotrophic organisms in stratified estuarial waters of Alberni Inlet, B.C.)
T 509 (content of B.C. kelp during growing season)
- Nitrite (for general data re content in natural waters see also Inlets; Limnology; Nutrients, aquatic; Oceanography; Production, primary)
J 32(11): 2025, 2033 (nitrification, & parasiticides effects on nitrification, in an aquatic recirculating system)
- Nitrogen compounds (see Acids, amino; Ammonia; Eutrophication; Fenitrothion; Fertilizers; Limnology; Nitrate; Nitrite; Nutrients, aquatic; Proteins; Sewage; Trimethylamine; also many other compounds too numerous to index under this heading because they are often complex or collectively grouped as "nitrogen" or "nitrogenous" materials, e.g. as in many references to metabolism or aquatic nutrients)
- Nobbs, Paul A.
J 32(2): 219 (filtering & feeding rates in arctic *Daphnia*)
- Nocomis leptocephalus* (see Chub, bluehead)
- Noise (see also Sound, reactions to)
T 563 (analysis of underwater, at offshore oil drilling operation in Bay of Fundy, N.S., & possible effect on herring)
S 2032 (of trawling effect on Atl. cod gillnet catches)
- Nomenclature (see also Classification; Speciation; Systematics; Taxonomy)
J 32(7): 966 (recommended common names for smaller cetaceans)
(7): 1073 (re Franciscana (a dolphin))
S 2061 (changes in Brachypterinae genera & species of Plecoptera)
- North Dakota, USA
J 32(6): 809 (effects of saline water from lakes on fathead minnow embryos & sac fry)
- North Harbour River, Nfld.
J 32(12): 2343 (evaluation of transplantations of B.C. pink salmon into)
- Northwest Territories (Territory (N.W.T.), Canada) (see also Great Bear Lake, Great Slave Lake; Holman; Mackenzie River system; Yellowknife)
J 32(3): 427 (dynamics of exploited lake whitefish populations & their management)
T 504; 566 (alphabetical lists of freshwater bodies, keyed to bibliography of further 1000 references to Canadian limnology & fisheries)
- 533 (experimental cropping of lakes: phytoplankton & zooplankton)
545-557 (a series on ecological studies of waters in the Mackenzie R. (& Porcupine R., Yukon) systems re proposed pipeline & highway developments; many of the streams, rivers, & lakes about which data are given in these reports are not indexed separately)
- Norway
J 32(7): 1083 (expansion of small-whale fishery to arctic & NW Atl.; biology of small whales)
(7): 1163 (many aspects of small-whale fishery & gear in N)
- Notemigonus crysoleucas* (see Shiner, golden)
- Notoacmea* (see Limpets)
- Notropis rubellus* (see Shiner, rosyface)
spilopterus (see Shiner, spotfin)
- Noturus gyrinus* (see Madtom, tadpole)
- Nova Scotia (Province (N.S.), Canada) (see also Bedford Basin; Bras d'Or Lakes; Fundy, Bay of; Georges Bank; Pictou; Scotian Shelf; St. Margaret's Bay)
T 504; 566 (alphabetical lists of freshwater bodies, keyed to bibliography of further 1000 references to Canadian limnology & fisheries)
- Nowak, Stanley Henry
T 495 (a solid-state temperature controller with heating & cooling control)
- Nowlan, Sandra Simpson
J 32(9): 1595 (superchilling temperature re deteriorative changes in stored postrigor Atl. cod muscle)
- Nubia, Lake, Sudan (southern portion of Nasser Reservoir, Egypt)
J 32(11): 2137 (estimates of potential fish yield (e.g. *Tilapia nilotica*))
- Nuclear power plants (see Power plants; Uranium derivatives)
- Nucleotides (see also Adenosine)
S 2037 (adenine-derivative enzymes re degradation of, in American lobster tail muscle)
2087 (effects of several, on algal threonine deaminase activity)
- Nutrients, aquatic (see also Aquaculture; Culture; Feed; Lakes; Limnology; Productivity)
J 32(11): 2189 (ammonia & inorganic phosphorus excretion by marine zooplankton re phytoplankton concentrations)

- (12): 2413 (contribution of sockeye salmon carcasses to phosphorus, Babine L., B.C.)
- T 511 (geochemistry & nutrient regime of SW Man. prairie pothole lakes)
- 524 (in shelf & Georges Bank waters off N.S.)
- 553 (for enrichment of phytoplankton growth in a lake, re crude oil biodegradation)
- 558; 564 (Carnation Creek, Vancouver Is., B.C., an undisturbed rain forest stream)
- 547; 556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- S 2019 (as for T 511 above)
- 2024 (rates of N & P to L. Winnipeg, Man., re diversion of Missouri R. water into Red & Assiniboine rivers, Man.)
- 2054 (in S Beaufort Sea)
- 2078 (re effects of fertilization of an Experimental Lakes Area lake, NW Ont.)
- Nutrition; Nutritive value (see Acids, amino; Acids, fatty; Aquaculture; Bioenergetics; Composition, chemical; Culture; Diet; Digestion; Feed; Feedstuff; Food; Metabolism; Mineral constituents; Nutrients, aquatic; Oils, fatty, & fats; Proteins; Productivity; Quality of fishery products; Vitamins; etc.)
- O**
- Obituary
- J 32(8): 1503 (of Albert Lewis Tester)
- O'Brien, William John
- J 32(10): 1860 (dorsal light response as index of prey preference by bluegill)
- Ocean (see names of; also Oceanography headings)
- Ocean perch (see Redfish; for Pacific Ocean perch, see Perch, Pacific ocean)
- Oceanaria (see Aquaria; Holding, live)
- Oceanography (general) (see also Coastal zone; Estuaries; names of oceans; following headings; for oil spills, see Oils, petroleum)
- J 32(8): 1465 (as investigated by FRBC (summary))
- (9): 1671 (review of book on freedom of oceanic research, e.g. in coastal zones)
- (11): 2231 (perspective & review of biological oceanography; its history, development, teaching, & interaction with other marine sciences in Canada (& some other countries); also projected need for its further development in Canada)
- S 2085 (some features of turbulent diffusion from a continuous source at sea)
- A 321 (review of book on contemporary readings in ocean sciences)
- Oceanography, arctic
- J 32(11): 2276 (biological oceanography in Canadian arctic & subarctic waters)
- S 2054 (re nutrients in S. Beaufort Sea)
- Oceanography, North Atlantic (see also Atlantic Ocean; Caribbean Sea; Oceanography (general); Oceanography, Northwest Atlantic)
- S 2065 (water columns between N.S. & Bermuda)
- Oceanography, North Pacific (see also Pacific Ocean)
- J 32(2): 253 (comparison of Canadian & Japanese merchant-ship observations of sea-surface temperatures in vicinity of Ocean Weather Station "P," 1927-33)
- T 522; 540 (Ekman transport computations & charts, 1973; 1974)
- Oceanography, Northeast Pacific coastal (see also Coastal zone; Georgia, Strait of; Estuaries; Inlets (and names in that heading); Pacific Ocean; Queen Charlotte Sound and Strait (including part of Hecate Strait); Salinity; Temperature)
- J 32(9): 1561 (annual & longer term variations of deep-water properties of S.B.C.)
- (10): 1693 (seasonal effects of a tidewater glacier on water masses of Muir Inlet, Alaska)
- (11): 2268 (a prognosis for Canadian benthic oceanography)
- Oceanography, Northwest Atlantic coastal (see also Atlantic Ocean; Bedford Basin; Bras d'Or Lakes (tidal); Coastal zone; Come-by-Chance Bay; Estuaries; Fundy, Bay of; Georges Bank; Grand Bank; Maine, Gulf of; Passamaquoddy Bay; Petpeswick Inlet; Scotian Shelf; St. Lawrence, Gulf of; St. Margaret's Bay)
- J 32(11): 2268 (a prognosis for Canadian benthic oceanography)
- Octopine
- J 32(8): 1329 (accumulation in ice-stored scallop muscle injected with pyruvate)
- Octopus (*Octopus apollyon*)
- T 542 (B.C. commercial groundfish fishery catches, 1974)
- Odell, Daniel Keith
- J 32(7): 1055 (status & aspects of bottlenose dolphin life history in Florida)
- Odense, Paul Holger
- S 2016(F) (accumulation & histochemistry of Fe in gills of lobster & a shore crab)
- 2031 (ultrastructure of some pelecypod adductor muscles)
- Odobenus rosmarus rosmarus* (see Walrus)
- Odonata (dragonflies)
- J 32(8): 1455 (toxicity of a larval lampricide to *Ophiogomphus*)
- T 549; 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
- S 2074 (as for T 549 above)

- Odor (*see* Olfactory perception; Quality of fishery products)
- Ohsumi, Seiji
 J 32(7): 995 (antarctic minke whale biological parameters & virginal population level)
 (7): 1111 (review of Japanese small-type whaling)
 (7): 1229 (incidental catch of cetaceans with salmon gillnets)
- Oil spills (*see* Oils, petroleum)
- Oils, fatty, and fats (*see also* Acids, fatty; Blubber; Composition, chemical; Enzymes; Lipids; Liver (oils); Rancidity; Triglycerides)
 J 32(2): 297 (inhibition of FFA formation in Atl. cod liver oil by commercial Na hypochlorite solution (Javex))
 (4): 507 (fat content, & fatty acids of some commercial oils of Canadian capelin, 1972-73)
 (6): 807 (tocopherol composition of frozen Atl. herring oil)
 (7): 1163 (processing & products from Norwegian small-whale fishery)
 (9): 1643 (possible product from lumpfish wastes; also fatty acids of)
 CHN 54 (docosenoic fatty acids in Pac. vs. Atl. herring oils re suitability for hydrogenating for margarine & shortening fats)
 55 (fish oils as pigment source in trout & salmon feeds)
 S 2017 (perch & bass fat content re uptake of DDT & PCB)
 2058 (myocardial alterations in rat from feeding partially hydrogenated Atl. herring, redfish, & flatfish oils, also peanut oil)
 2070; 2080 (chemical composition of, in melon, jaw, & blubber, in various dolphins, porpoises, & whales)
 2088 (review of marine lipids & fatty acids, & of partially hydrogenated oils, re human nutrition)
- Oils, petroleum (*see also* Biodegradation; Dispersants; Drilling; Noise. (Note: T 545-557 are a series on ecological studies of waters in the Mackenzie River (N.W.T.) and Porcupine River (Yukon) systems re proposed oil pipeline and highway developments))
 J 32(2): 316 (differentiation between diesel oil & natural hydrocarbons re contamination in cooked lobster meat (French abstract on J 32(8):1505))
 (10): 1864 (acute toxicity of benzene component to striped bass)
 (11): 2125 (biodegradation of phenolic compounds downstream from a refinery)
 (11): 2221 (effects of water-soluble fraction on pink salmon fry opercular rates)
 T 481 (sampling & fluorescence spectroscopy analysis of, in sea water)
 485 (estimating hydrocarbon concentrations in sediments of Come-by-Chance Bay, Nfld., during oil refinery operation)
- 547 (ecological studies of aquatic organisms re sedimentation, Mackenzie R. & Porcupine R. systems)
 548; 549 (effects of experimental crude oil spills on 3 Mackenzie R. delta lakes)
 550 (effects of crude oil on zoobenthos of a N. Yukon stream a year after an experimental spill)
 551 (effects of crude oil on colonization of artificial substrates by zoobenthos organisms)
 552 (effects of crude oil on periphyton in selected N.W.T. lakes & rivers)
 553 (crude oil & nutrient enrichment studies in a Mackenzie R. delta lake re possible biodegradation of the oil)
 554 (emergence of insects from an oil-polluted vs. a normal lake, in Mackenzie R. delta)
 S 2014 (effect of dispersants on biodegradation & growth of bacteria on crude)
 2074 (effect & fate of experimental spill on 2 Mackenzie R. delta lakes, N.W.T.)
- Olfactory perception and response (*see also* Attractants; Baits; Behavior; Chemoreception)
 J 32(9): 1674 (review of book on chemoreception in marine organisms)
 S 2012 (of American lobster to extracts from prey species & Atl. cod muscle fractions; effects of antennule ablation)
 2050 (morpholine as olfactory stimulus in fish, e.g. rainbow trout)
- Oligochaeta (*see also* Benthos; Invertebrates)
 J 32(8): 1455 (toxicity of a larval lampricide to earthworms)
 T 547; 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
 572 (of L. Superior)
 S 2055 (of arctic S Beaufort Sea zoobenthos)
 2077 (effects of fenitrothion pesticide on)
- Olney, C. E.
 J 32(11): 2205 (chlorinated hydrocarbons residues in cetaceans)
- Oncorhynchus* (in addition to below, *see* Salmon (Pacific in general))
gorbuscha (*see* Salmon, pink)
keta (*see* Salmon, chum)
kisutch (*see* Salmon, coho)
nerka (*see* Salmon, sockeye; Kokanee)
tshawyscha (*see* Salmon, chinook)
- Ontario (Province (Ont.), Canada) (*see also* Erie, Lake; Experimental Lakes Area Lakes; George Lake; Huron, Lake; La Cloche Mountains Lakes; Ontario, Lake; Ottawa River; Superior, Lake)
 J 32(1): 196 (table of details of 20 reservoirs for hydroelectric projects)
 (9): 1519 (simple prediction of lake development capacity from lake trophic status of S)
 T 504; 566 (alphabetical lists of freshwater bodies, keyed

- to bibliography of further 1000 references to Canadian limnology & fisheries)
- Ontario, Lake
J 32(8): 1409 (distribution of nearshore fish communities near thermal effluent from a nuclear generating station)
- Operculum (see also Gills; Respiration)
J 32(5): 643 (movements of Atl. salmon alevins)
(11): 2221 (rates: effect of water-soluble fraction of crude petroleum oil, on pink salmon fry)
- Ophelina* (see Polychaeta)
- Ophiodon elongatus* (see Lingcod)
- Ophiogomphus* (see Odonata)
- Ophiuroidea (see Brittle stars)
- Orcaella brevirostris* (see Dolphin, Irrawaddy)
- Orcinus orca* (see Whale, killer)
- Orconectes* (see Crayfish)
- Oregon State, USA
J 32(8): 1442 (distribution of hyperiid amphipods off coast)
- Organochlorine derivatives (see also DDT; Polychlorinated biphenyls; also compounds indicated in the heading Chlorine and derivatives)
S 2015; 2017 (determination in organic materials)
- Orientation (see Homing; Migration; Spawning)
- O'Riordan, Colm Eanna
J 32(7): 1101 (long-finned pilot whales driven ashore in Ireland, 1800-1973)
- Orthopristis chrysoptera* (see Pigfish)
- Osteology (see Bone)
- Ostracoda
T 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
S 2055 (of arctic S Beaufort Sea zoobenthos)
- Ostrea edulis* (see Oyster, European)
- Ostrosky, Milton Lewis
J 32(1): 117 (preliminary assessment of environmental impact of Churchill Falls hydroelectric project, Labrador)
- Otoliths (see also Age)
J 32(2): 289 (age validation from, for Greenland halibut)
- Ottawa River, Ont. and Que.
J 32(10): 1755 (heavy-metal binding components in waters of system, near Ottawa)
- Otte, Gernot
T 476 (macroinvertebrate communities distribution on a mud flat influenced by sewage, Fraser R. estuary, B.C.)
519 (laboratory key for identifying B.C. *Corophium* amphipods)
- Otter trawls (see Trawls)
- Outram, Donald Noel
CNG 100 (Pac. herring in B.C. waters)
- Ovary
J 32(11): 2061 (activation energy of aspartate transcarbamylase from Atl. cod)
- Overwintering (see Temperature, biological effects; Winterkill)
- Oxygen, dissolved (see also Bioenergetics; Blood; Eutrophication; Limnology; Photosynthesis; Pollution; Respiration)
J 32(8): 1283 (depletion by algae, re fish summerkill in SW Man. prairie ponds)
(9): 1539 (re blood oxygen dissociation characteristics of winter flounder)
(9): 1561 (annual & longer-term variations in S B.C. coastal deepwater)
(10): 1693 (seasonal variations in an Alaskan inlet with tidewater glaciers)
(11): 1971 (oligotrophic character of Great Bear L., N.W.T.)
(12): 2295 (review of minimal requirements & tolerance for, of Canadian aquatic life)
(12): 2479 (daily pattern of consumption by young sockeye salmon under controlled conditions)
(12): 2559 (re functional hematology during ringed seal deep dives)
T 511 (in waters of some SW Man. prairie pothole lakes; also biological oxygen demand)
517 (electronic system for continual monitoring of, in experimental tanks)
S 2019 (as for T 511 above)
- Oyster, Atlantic (*Crassostrea virginica*) (American oyster)
J 32(4): 541 (*Vibrio parahaemolyticus* pathogen found in only 3 of 22 samples from Canadian Atl. coast)
(6): 739 (bacteria isolated from sea water used in laboratory culture of)
S 2031 (adductor muscle ultrastructure)
2072 (occurrence & chemical structure of nonmethylene-interrupted dienoic fatty acids in)
- Oyster, European (*Ostrea edulis*)
J 32(12): 2586 (50 years experience in culture at Conway, Wales (review of book))

Oyster, Pacific (*Crassostrea gigas*)

J 32(12): 2471 (genetic variation in)

MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)

T 516 (phytoplankton production, etc., in Pendrell & Hotham sounds, B.C., re seed production)

A 324 23 (accumulation of Zn from polluted sea water)

P

Pacifastacus (see Crayfish)

Pacific Ocean (see also Oceanography headings)

J 32(7): 947-950 (distribution & fisheries for smaller cetaceans in N; E tropical; central, S, & W tropical; S temperate regions)

(7): 1059 (distribution & differentiation of *Stenella* dolphins populations in E tropical)

(8): 1500 (review of book on fisheries of N)

T 522; 540 (Ekman transport computations & charts for N, 1973; 1974)

Packaging (see also Transportation)

T 514 (survey & characterization of Canadian & imported commercially canned herring products)

Pagophilus groenlandicus (see Seal, harp)

Palaeoecology

S 2028 (climatic control of brachiopods)

Pancreas (see also Interrenal tissue; for infectious pancreatic necrosis, see Viruses)

J 32(8): 1459 (tissue histology in channel catfish re acid phosphatase localization)

Pandalus borealis (see Shrimp, northern pink)*montagui* (see Shrimp, striped pink)

Pannekoek, W. J.

T 498 (methods of analyzing feathers for elemental content)

Paphia staminea (see Clam, Pacific littleneck)

Paradis, Michel

J 32(2): 316 (distinguishing natural hydrocarbons & traces of diesel oil contamination in cooked lobster meat (French abstract on J 32(8): 1505))

(9): 1643 (utilization of wastes from lumpfish roe separation)

S 2072 (occurrence & structure of nonmethylene-interrupted dienoid fatty acids in American oyster)

Paraffins (see Hydrocarbons; Hydrocarbons, halogenated)

Paralepis rissoi kroyeri (see Barracudina, white)*Paralichthys dentatus* (see Flounder, summer)*Paralithodes camtschaticus* (see Crab, king)*Paramphinoe* (see Nematoda)

Paranjape, Madhu A.

J 32(8): 1399 (sedimentation of organic matter in St. Margaret's Bay, N.S.)

Parasites; Parasitization (see also Acanthocephala; Acarina; Cestoda; Copepoda; Disease; Fungus; Isopoda; Myxosporidea; Nematoda; Parasiticides; Sporozoa; Trematoda; etc.)

J 32(1): 211 (review of book on control & treatment of, for freshwater fishes)

(7): 1073 (of Franciscana dolphin)

(7): 1197 (of dolphins in captivity by various internal)

(8): 1465 (of aquatic organisms, as investigated by FRBC (summary))

(11): 2069 (abundance & population of, infecting Atl. salmon in Trout Brook, N.B.)

B 192 (catalogue & synopsis of *Caligus* species parasitic on fishes)

A 327 (review of book on parasites & diseases of fishes & aquatic invertebrates)

Parasiticides

J 32(11): 2033 (effects on nitrification in an aquatic recirculating system)

Parker, Robert Ray

J 32(1): 72 (primary productivity inhibition from phytoplanktonic vs. heterotrophic organisms competition for nitrate in stratified estuarial waters of Alberni Inlet, B.C.)

B 192 (catalogue & synopsis of *Caligus* copepoda parasitic on fishes)

Parks

MSP 26 (marine, of Gulf Islands, B.C. (map & illustrations of marine organisms))

Parophrys vetulus (see Sole, English)

Parsons, Leon Scott

J 32(8): 1347 (migrations & biology of Atl. mackerel in Nfld. waters)

Parsons, Timothy Richard

J 32(2): 243 (metabolism of *Anisogammarus pugettensis* amphipod re its trophic position in food web of young salmonids)

(11): 2231 (biological oceanography in Canada (perspective & review))

Parturition (see Mammals, aquatic; Reproduction)

Passamaquoddy Bay, N.B.

T 531 (catches of sea cucumbers)

538 (effects of experimental diets on rainbow trout growth in salt water)

- Pathogens (*see also* Bacteria; Disease; Lobster pathogen; Viruses)
 J 32(8): 1243 (diagnostic procedures for gram-negative fish-disease)
 (9): 1648 (*Phoma herbarum*, a fungal plant saprophyte, pathogenic to rainbow trout, chinook & coho salmon)
 S 2030 (melanin biosynthesis by *Aeromonas salmonicida*)
- Pathology (*see also* Cytology; Disease; Histology; Lesions; Parasites; Tumors; Viruses)
 J 32(8): 1289 (leucine aminonaphthylamidase re fish pathobiology diagnostic value)
- Paton, David Wayne
 T 506 (chemical delineation of a submerged mine tailings plume in 2 B.C. inlets)
- Pauley, Gilbert Buckhannan
 J 32(9): 1674 (review of book on fish immunology)
- PCB (*see* Polychlorinated biphenyls)
- Peamouth (*Mylocheilus caurinus*) (peamouth chub)
 T 515 (purse-seine catches, Babine L., B.C., 1973 data record)
- Peanut oil (*see* Oils, fatty)
- Pearcy, William Gordon
 J 32(8): 1442 (hyperiid amphipods distribution off Oregon coast)
- Pedersen, Mark G.
 J 32(11): 2169 (movements & growth of petrale sole tagged off Washington & SW Vancouver Island)
- Pelecypoda (Bivalvia; Lamellibranchiata) (*see also* Clam; Clams; Mollusca; Mussel; Oyster; Sca'op; etc.)
 T 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
 S 2055 (of arctic S Beaufort Sea zoobenthos)
- Pen, fish; Cage
 T 500 (for observing growth, etc. of blue mussel)
 538 (mooring technique for fish pens)
 541; 543 (rearing Pac. salmon in floating sea pens)
 544 (raft for 5 mariculture nets)
- Pendrell Sound, B.C.
 T 516 (marine phytoplankton production, distribution, & species composition, re commercial oyster seed production)
- Penn, A. F.
 J 32(1): 136 (legal aspects of development of James Bay hydroelectric project, Que.)
- Pennsylvania, USA
 J 32(8): 1259 (freshwater fish eggs & young origin & survival re pumping between 2 reservoirs (species not indexed herein))
- Penrose, William Roy
 J 32(8): 1275 (arsenic dispersion in sea water, sediments, & biota, near its source)
 (12): 2385 (organic arsenic biosynthesis in brown trout)
- Pentachlorophenol (*see* Phenols)
- Peponocephala electra (*see* Whale, melon-headed)
- Peprilus triacanthus (*see* Butterfish)
- Perca flavescens (*see* Perch, yellow)
- Perch, Pacific ocean (*Sebastes alutus*)
 T 497 (catches, biomass, lengths, & sex ratio, Queen Charlotte Sound area, B.C., survey, 1974)
 542 (catch & effort statistics, in B.C. commercial groundfish fishery, 1974 data record)
 575 (yield & composition of deboned flesh from headed & gutted)
- Perch, yellow (*Perca flavescens*)
 J 32(10): 1785 (biomass responses to phytoplankton & benthic biomass, L. Memphremagog, Que. & Vermont)
 (10): 1799 (production in a new S Carolina impoundment)
 (11): 2214 (fat content seasonal changes re winter mortality in 2 Que. lakes)
 S 2017 (mercury, copper, cadmium, & organochlorine residues, L. Erie)
- Perchloro derivatives of aromatic-ring compounds (*see also* Phenols; Polychlorinated biphenyls)
 J 32(3): 411 (Na pentachlorophenate (a wood preservative) as reference toxicant for salmonid bioassays)
 T 464 (*see* above reference)
- Percopsis omiscomaycus (*see* Trout-perch)
- Percy, Johnathan Arthur
 S 2040 (laboratory thermal acclimation of a northern arctic sea urchin)
- Perez, M.
 J 32(12): 2538 (edema in spawning Pac. salmon)
- Peridineae (Dinophyceae)
 T 512 (species distribution in some SW Man. prairie pothole lakes)
 513 (seasonal successions in some NW Ont. lakes after artificial eutrophication)
 533 (abundance & biomass re experimental cropping of some N.W.T. lakes)
- Periscopy (*see* Photography)

- Periwinkles
MSP 26 (drawings of *Littorina* spp. of Gulf Islands marine parks, B.C.)
- Perkins, Michael Alan
J 32(6): 817 (kokanee salmon decomposition effects on subalpine stream ecology)
- Perrin, William Fergus
J 32(7): 1059 (distribution & differentiation of *Stenella* dolphins populations in E tropical Pac. Ocean)
- Perspectives
J 32(1): 97-209 (foreward & 9 articles re symposium on hindsight & foresight in Canada re environmental impact assessment of hydroelectric projects)
(3): 427 (dynamics of exploited lake whitefish populations & their management, particularly in N.W.T.)
(6): 821 (reproductive guilds of fishes: a proposal & definition)
(8): 1465 (Fisheries Research Board of Canada — 75 years of achievements)
(9): 1657 (benthic organisms & the structure of marine ecosystems)
(9): 1663 (terminology of intervals in fish development)
(10): 1887 (science for Canada's shelf-seas fisheries)
(11): 2231 (& review of biological oceanography in Canada)
(11): 2268 (a prognosis for Canadian benthic oceanography)
(11): 2276 (biological oceanography in Canadian arctic & subarctic waters)
(12): 2569 (international joint ventures in fishing & 200-mile economic zones)
- Pesticides (see also Aroclor; DDT; Dieldrin; Fenitrothion; Hydrocarbons, halogenated; Insecticides; Perchloro derivatives; Phosphamidon; Polychlorinated biphenyls; Toxaphene; Toxicants; etc.)
J 32(10): 1880 (improved flowing water system for testing toxicity to larval brachyuran crabs)
S 2022 (re eutrophication)
- Peterka, John Joseph
J 32(6): 809 (saline N Dakota lake water effects on fat-head minnow embryo & sac fry survival)
- Peterman, Randall M.
J 32(11): 2179 (new techniques for policy evaluation in ecological systems: methodology for a case study of Pac. salmon)
- Peters, Marilyn Diane
T 535 (clinoptilolite zoolite application to ammonia removal in hatchery & aquaculture water reuse systems)
- Peterson, Richard Harry
J 32(5): 643 (Atl. salmon alevin pectoral fin & opercular movements)
- Petpeswick Inlet, N.S.
J 32(1): 83 (re above-ground production of marsh cordgrass near the N limit of its range)
- Petroleum oils (see Hydrocarbons; Oils, petroleum)
- Petrolisthes eriomerus* (see Crab, porcelain)
- Petromyzon marinus* (see Lamprey, sea)
- pH
J 32(4): 493 (& temperature effects on rainbow trout in acid waters)
(6): 769 (effects on toxicity of antimycin to fish)
(8): 1267 (resistance to low & high, of infectious pancreatic necrosis virus)
(12): 2379 (effect on aqueous NH₃ equilibrium)
T 517 (electronic system for continual monitoring of, in experimental tanks)
S 2008 (long-term acidification of lakes effects on fishes)
- Phacophyta (see Pheophyta)
- Phalacrocorax auritus* (see Cormorant, double-breasted)
- Phenols; Creşols; Xylenols (see also Guaiacol derivatives; Lampricides; Perchloro derivatives of aromatic ring compounds)
J 32(2): 292 (trace analysis of in water, from breakdown of a commercial lubricant)
(4): 457 (analysis for tri-aryl phosphate ester phenols of a commercial lubricant (Imol S-40) in fish & water samples)
(11): 2125 (biodegradation of phenolic compounds downstream from a St. Lawrence R. petroleum oil refinery)
S 2038 (determination & amounts of pentachlorophenol & chlorobiphenyls in various biological materials)
- Phenotypes (see Genetics)
- Pheophyta (see also Kelp; Seaweeds; Wrack, bladder)
J 32(8): 1275 (arsenic uptake from mine effluent by *Fucus* & *Ascophyllum nodosum*)
S 2045 (bacteria associated with *Laminaria longicruris* fronds, re detrital feed chain)
- Phoca hispida* (see Seal, ringed)
vitulina (see Seal, harbor)
- Phocoena dioptrica* (see Porpoise, spectacled)
phocoena (see Porpoise, harbor)
sinus (see Cochito)
spinipinnis (see Porpoise, Burmeister's)
- Phocoenoides dalli* (see Porpoise, Dall's)

Pholis gunnellus (see Gunnell, rock)

Phoma herbarum (see Fungus)

Phosphamidon

J 32(11): 2055 (chemoreception of American lobster in presence of)

Phosphates (see Eutrophication; Iron derivatives; Limnology; Nutrients, aquatic; Phosphates, organic; Phosphorus derivatives)

Phosphates, organic (see also Fenitrothion; Nutrients, aquatic; for phospho-enzymes, see Enzymes; for phospholipids, see also Lipids)

J 32(1): 61 (biosynthetic pathways of transferase incorporation of glycerol-3-phosphate into rainbow trout liver lipids)

(4): 457 (analysis for tri-aryl phosphate ester lubricant (Imol S-140) in fish tissue & water)

(5): 599 (adenosine triphosphate measurements in soil & marine sediments by luciferin bioluminescence)

(11): 2153 (diisopropylfluorophosphate inhibition of acetylcholinesterase re pectoral neuromuscular function in largemouth bass)

T 486 (re reference J 32(4) above; natural hydrolytic degradation of Imol can release inorganic PO_4 to natural waters)

Phospholipids (see Acids, fatty; Lipids; also Enzymes)

Phosphorus derivatives (see also Eutrophication; Limnology; Nutrients, aquatic; Phosphates, organic; Pollution)

J 32(9): 1519 (re prediction of lake development capacity from lake trophic status)

(9): 1643 (in lumpfish & menhaden meals)

(11): 2189 (excretion of inorganic, by marine zooplankton re phytoplankton concentration)

T 509; 568 (variation of amount in B.C. kelp during growing season)

547; 556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)

Photography

J 32(2): 321 (of live, unanesthetized fish for estimating dry weight)

(6): 729 (underwater, re chemical attractants effects on fish in their natural habitat)

(6): 761 (bottom, censusing commercial spider crab & calibrating effective area fished per trap)

(9): 1533 (periscopic method for 3-dimensional positions of fish in schools)

Photoreceptors (see Eye)

Photosynthesis (see Chlorophyll; Nutrients, aquatic; Phytoplankton; Productivity, primary; Radiation)

Phthalates, organic

J 32(3): 333 (biodegradation of plasticizers in freshwater hydrosol)

Phylogeny

B 193 (of Nearctic & Palaearctic *Heterotrissocladius* chironomids)

Physeter catodon (see Whale, sperm)

Physiography

J 32(11): 1971 (Great Bear L., N.W.T.)

S 2084 (Gulf of St. Lawrence)

Physiology (see also aspects of, e.g., Disease; Feed; Growth; Metabolism; Respiration, etc.)

MSP 27 (practical guide to, & anatomy, of Pac. salmon)

Phytanic acid

S 2071 (levels in many commercial fish products (not indexed separately) re desirability of those with low marine fat content in diet of persons with Refsum's syndrome)

Phytoplankton (see also Biomass; Chlorophyll; Diatoms; Feed; Lakes; Limnology; Nutrients, aquatic; Plankton; Productivity, primary; Radiation)

J 32(1): 72 (production inhibited through heterotrophic competition for nitrate in stratified estuarial waters of Alberni Inlet, B.C.)

(11): 2189 (concentration re ammonia & inorganic phosphorus excreted by zooplankton)

(12): 2413 (succession & primary production, Babine L., B.C.)

(12): 2487 (culture studies on effects of borate pollution on growth of 19 species from 10 classes of algae)

T 511; 512 (biomass; successions & species distribution, in SW Man. prairie pothole lakes & ponds)

513 seasonal successions following artificial eutrophication of 7 lake basins in NW Ont. Experimental Lakes Area)

516 (marine production, distribution, & species composition, Pendrell & Hotham sounds, B.C.)

523 (mathematical representation & prediction of phytoplankton productivity)

524 (production, nutrients, & density structure in marine shelf area & Georges Bank, N.S.)

533 (re experimental cropping of lakes near Yellowknife, N.W.T.)

548; 549; 552; 553; 557 (re petroleum oil possible effects on waters of Mackenzie & Porcupine R. systems N.W.T. & Yukon)

560 (production in lakes of Experimental Lakes Area, NW Ont.)

S 2074 (re effect & fate of crude petroleum oil experimental spill on 2 Mackenzie R. delta lakes, N.W.T.)

2086 (biochemical & mineral composition, St. Margaret's Bay, N.S.)

Pickard, George Lawson

J 32(9): 1561 (annual & longer-term variations of deep-water properties of S B.C. coastal waters)

- (11): 2075 (deep-water exchanges in Bute Inlet, B.C.)
- Pickarel, chain (*Esox niger*)
J 32(10): 1799 (production in a new S Carolina impoundment)
- Pictou, N.S.
T 532 (observations of effects of scallop drags on lobster bottoms near)
- Piekarski, J.
J 32(9): 1633 (lecithin biosynthesis pathway in rainbow trout liver microsomes)
- Pigfish (*Orthopristis chrysoptera*)
J 32(10): 1884 (locomotor activity rhythms)
- Pigments; Pigmentation (see also Color)
CHN 55 (fish oils as source of, for salmonid feeds to enhance pink flesh color)
T 531 (carotene & xanthophylls in Atl. sea cucumber meal)
S 2030 (melanin biosynthesis from tyrosine by *Aeromonas salmonicida*)
2067 (observations on *cis-trans* isomerism of alloxanthin, & isolation of a new carotenoid, manixanthin, an unusually stable *cis*-isomer, from *Chroomonas salina* cryptomonad)
- Pike, northern (*Esox lucius*)
J 32(10): 1711 (fine structure of retinal photoreceptors)
T 528 (effects of hydroelectric development on biology: reproduction, development, & population dynamics (literature review & bibliography))
547 (taken at a highway crossing of Mackenzie R. tributary (N.W.T.))
- Pilcher, K. Stephen
J 32(9): 1545 (water temperature re ceratomyxosis in rainbow trout & coho salmon)
(9): 1553 (water temperature re *Flexibacter columnaris* infection in steelhead trout, chinook & coho salmon)
- Pilot plants
CHN 50 (for separation of flesh & bones from fish)
T 574 (for application of an improved formulated breaded product from mechanically deboned freshwater fish (e.g. white sucker))
- Pimephales notatus* (see Minnow, bluntnose)
promelas (see Minnow, fathead)
- Pincock, Douglas George
T 499 (automatic monitor for detecting & recording passage of transmitter-fitted fish)
- Pinhorn, Allenby Thomas
T 526 (current status of Atl. offshore groundfish stocks & fisheries, 1975)
- Pinnipedia (see Seal; Walrus)
- Pipefish, northern (*Syngnatus fuscus*)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Pippy, John Herbert Charles
J 32(1): 29 (identification of an *Anisakis* nematode larva as *A. simplex*)
- Pisidium* (see Clams, freshwater)
- Pitcher, Tony John
J 32(9): 1533 (periscopic photographic method for 3-dimensional positions of fish in schools)
- Pitt, Thomas Kenton
J 32(2): 289 (otolith age validation of Greenland halibut)
(8): 1383 (changes in abundance & certain biological characteristics of Grand Bank American plaice off Nfld.)
- Pituitary
J 32(1): 11 (thiourea effects on, in sexually maturing vs. gonadectomized male sockeye salmon)
- Placopecten magellanicus* (see Scallop, sea)
- Plaice, American (*Hippoglossoides platessoides*)
J 32(4): 479 (trematode parasitization incidence re fish length & feed, Scotian Shelf & Gulf of St. Lawrence)
(4): 547 (geographic variation in incidence of trematode parasitization in NW Atl.)
(6): 775 (relative stability of minced flesh during storage at -5 C)
(8): 1383 (changes in abundance & certain biological characteristics of Grand Bank, off Nfld.)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
526 (current status of stocks & recent annual catches in ICNAF areas)
- Plankton (see also Phytoplankton; Zooplankton)
T 511; 512 (biomass & successions in some SW Man. prairie pothole lakes)
S 2075 (re production & feed web in marine planktonic communities)
- Planning (see Forecasting; Management; Policy; Strategy)
- Plants, pilot (see Pilot plants)
- Plants, power (see Power plants)
- Plasma (see Blood)
- Plastics; Plasticizers
J 32(3): 333 (biodegradation of phthalate plasticizers in freshwater hydrosol)

Platanista gangetica (see Susu, Ganges)
indi (see Susu, Indus)

Platichthys stellatus (see Flounder, starry)

Platt, Trevor Charles

T 523 (mathematical representation & prediction of phytoplankton productivity)

Plecoptera (stoneflies)

J 32(8): 1455 (toxicity of a larval lampricide to several species)

T 547; 557 (collected in Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) watersheds, 1971-73)

S 2061 (synopsis of Brachypterinae subfamily; key to N American genera & species; new descriptions of various genera & species; description of a new N American genus (*Bolotoperla*))

Pleomerism

J 32(12): 2453 (tendency among related fish species for vertebral number to be correlated with maximum body length, & its significance for taxonomy & fish biology)

PlEURoncodes planipes (see Crab, red)

Poecilia reticulata (see Guppy)

Poisons (see Toxicants)

Policy (see also International Commissions; Law; Management; Research and Development)

J 32(10): 1887 (perspective on science for Canada's shelf-seas fisheries)

(11): 2179 (new techniques for policy evaluation in ecological systems)

Polois, G.

J 32(11): 2125 (degradation of phenolic compounds downstream from a petroleum refinery)

Pollachius virens (see Pollock)

Pollock (*Pollachius virens*)

J 32(6): 775 (protein instability in minced flesh during storage at -5 C)

CHN 50 (separation of bones & minced flesh from filleting frames)

T 526 (current status of stocks & recent annual catches in ICNAF areas)

Pollock, walleye (*Theragra chalcogramma* (whiting))

T 496; 503 (catches during B.C. herring surveys, offshore SW Vancouver Is., 1972 & 1973; Juan de Fuca Strait, 1971)

497 (catches during groundfish survey, Queen Charlotte Sound area, B.C., Sept. 1974)

542 (catches & effort in B.C. commercial groundfish fishery: 1974 data record)

575 (yield & composition of deboned flesh from headed & gutted)

Polloni, Pamela Tannebrink

J 32(10): 1805 (benthic fauna in Gulf of Maine deep basins)

Pollution; Pollutants (*Note:* Because of the great number of publications on these subjects, in addition to the following general references certain aspects are indexed for convenience under separate headings such as: Analysis methods (chemical); Biodegradation; Detergents; Drilling fluids; Environment; Eutrophication; Flotation agents; Forestry; Hydrocarbons; Hydrocarbons, halogenated; Insecticides; Limnology; Lubricants; Metal ions; Mine wastes; Oils, petroleum; Perchloro derivatives; Pesticides; Phenols; Polychlorinated biphenyls; Power plants; Pulpmill effluents; Sewage; Textile industry effluents; Toxicants; etc. See also names of chemical elements, particularly those that are toxic or give rise to toxic derivatives)

J 32(8): 1465 (as investigated by FRBC (summary))

(8): 1501 (review of book on pollution ecology of freshwater invertebrates)

(10): 1852 (some methodology for appraising contaminants in aquatic systems)

A 324 (some biological concerns in heavy-metal pollution (review))

Polychaeta (see also Benthos; Invertebrates)

J 32(10): 1805 (*Paramphinoe jeffreysii*, *Heteromastus filiformis*, *Ancistrosyllis groenlandica*, & *Ophelina abranchiata* in Gulf of Maine deep basins)

T 557 (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)

S 2055 (of arctic S Beaufort Sea zoobenthos)

Polychlorinated biphenyls (PCB) (see also Perchloro derivatives)

J 32(10): 1705 (comparative uptake of Aroclor PCB & dieldrin, by white suckers)

(10): 1852 (mathematical model for appraising uptake & retention, from age, length, & weight of fish)

(11): 2111 (presence & distribution in arctic & subarctic marine food chains)

(11): 2205 (levels in blubber of various whales & dolphins)

S 2015 (determination in organic materials by combustion & microcoulometry)

2017 (in perch & bass, L. Erie (Ont.))

2038 (determination of chlorobiphenyls)

2046 (hydroxylation of biphenyl component in vitro by tissue preparations of various marine organisms)

2048 (levels in blubber of ringed seals, Canadian arctic)

Pomoxis nigromaculatus (see Crappie, black)

Ponds (see also Aquaculture)

J 32(8): 1283 (possibilities of summerkill risk in SW Man. prairie ponds)

T 510; 511; 512 (morphometry; geochemistry & nutrient

- regime; phytoplankton succession; in SW Man. prairie pothole lakes)
- Pontoporeia* (see Amphipoda)
- Pontoporia blainvillei* (see Franciscana)
- Pope, Gregory Fredrik
J 32(12): 2530 (crustacean plankton communities & their variation with predation, Matamek R., Que.)
- Populations; Population dynamics (see also Abundance; Biomass; Census; Communities; Distribution; Exploitation; Stocks)
J 32(1): 21 (status of a midwater, of L. Washington freshwater sculpin)
(3): 341 (dynamics, of 3 limnetic cladoceran species in an Ont. beaver pond)
(3): 427 (dynamics, of unexploited vs. exploited lake whitefish, & their management, particularly in N.W.T.)
(4): 471 (delineating spring & autumn herring in S Gulf of St. Lawrence)
(4): 499 (estimate of humpback whale in W Indies)
(4): 568 (frequency of detection & survival of infectious pancreatic necrosis virus in a carrier population of brook trout in a lake)
(5): 653 (meristic differences in spawning American shad)
(7): 1047 (identity, abundance, & present status of N American white whale)
(7): 1059 (distribution & differentiation of *Stenella* dolphins, E tropical Pac.)
(7): 1095 (abundance, re stranding mortality of smaller cetaceans in NE Atl.)
(7): 1145 (modified population models of long-finned pilot whale re short-finned squid annual production, Nfld.)
(8): 1305 (spatial model for an exploited shellfish, e.g. Georges Bank scallop fishery off N.S.)
(8): 1359 (movement, growth, & survival of wild brook trout, during removal of nontrout species in a stream)
(11): 2069 (dynamics, of parasites infecting Atl. salmon in Trout Brook, N.B.)
(11): 2091 (genetic variation & structure of American lobster)
(11): 2285 (re community ecology (book review))
B 191 (computation & interpretation of biological statistics of fish populations (has its own index))
T 467 (mathematics of interpreting echo integrator results for estimating density of fish)
483 (movements of fish, & species life histories, Lynn Creek, Vancouver Is., 1971-72)
527; 528; 529; 530 (effects of hydroelectric developments on dynamics, of lake whitefish; northern pike; yellow walleye; lake trout (literature reviews & bibliographies))
S 2053 (census of bowhead & white whales in E Beaufort Sea)
2064 (analysis of fish count data from digital echo-counting system)
- Porcupine River drainage system, Yukon Territory (Note: T 545-557 are a series on ecological studies of aquatic systems in this system and the Mackenzie River drainage system (N.W.T.) re proposed oil pipeline & highway development) (see also Cariboo Bar Creek)
T 546; 556(1); 556(2) (chemistry, mineralogy, & transport rates of sediments)
547 (ecological studies of aquatic organisms re sedimentation)
557 (species list of aquatic plants & animals in watershed, 1971-73)
- Porphyridum* (see Cyanophyta)
- Porpoise, Burmeister's (*Phocoena spinipinnis*)
J 32(7): 939 (overview), 947, 950 (distribution), 956 (incidental capture); 1123 (Chilean research)
- Porpoise, Dall's (*Phocoenoides dalli*)
J 32(7): 940 (overview), 948 (distribution), 956, 958, 1229 (incidental capture), 1197 (live capture technique for public display)
S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Porpoise, finless (*Neophocaena phocaenoides*)
J 32(7): 941-942 (overview), 948 (distribution)
- Porpoise, harbor (*Phocoena phocaena*)
J 32(7): 937-938 (overview), 946, 947, 948 (distribution), 952 (drive fishery), 956, 1229 (incidental capture), 1079 (Greenland occurrence & exploitation), 1083 (Norwegian fishery & biology), 1095 (stranding mortality re population abundance)
(7): 1223 (by-catches in salmon driftnets, W Greenland)
S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Porpoise, Peale's (see Dolphin, Peale's)
- Porpoise, spectacled (*Phocoena dioptrica*)
J 32(7): 939 (brief overview)
- Porpoise, True's (*Phocoenoides dalli truei*)
J 32(7): 1229 (incidental catches in salmon gillnets, Japan)
- Porpoises (see also foregoing species, also Cochito)
J 32(7): (an issue on biology & fisheries for smaller cetaceans) (Note: In some places therein there is lack of distinction between porpoises & dolphins)
B 190 (hydrodynamics & energetics of propulsion (not indexed separately in this index; see its indexes))
- Potassium derivatives
J 32(9): 1643 (in lumpfish & menhaden meals)
T 498 (analysis for, in feathers)
509 (variation in B.C. kelp over growing season)

- 511 (ionic concentrations in SW Man. prairie pot-hole lakes)
- 547; 556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. Yukon systems)
- 568 (ability of *Nereocystis leutkeana* kelp to concentrate, from sea water)
- S 2086 (in phytoplankton & 2 zooplankton species, St. Margaret's Bay, N.S.)
- Pothole lakes (see Erickson-Elphinstone District Lakes, SW Man.)
- Poulet, Serge André
J 32(5): 706 (nonselective feeding of *Pseudocalanus minutus* copepod (correction on J 32(8): 1505))
- Poulin, Vincent Aloysius
J 32(5): 689 (Arctic grayling & young Arctic char movements & growth in a small arctic Alaskan stream)
- Power, Geoffery
J 32(2): 307 (Atl. salmon taken in sea in N Labrador)
(9): 1652 (brook trout & young Atl. salmon shade selection re water depth)
- Power plants (see also Dams; Hydroelectric projects; Reservoirs)
J 32(8): 1409 (summer distribution of nearshore fish community near effluent thermal plume from a L. Ont. nuclear generating station)
(12): 2495 (toxicity to 2 copepods of residual chlorine in cooling waters)
A 324 (environmental pollutive potential & toxicity re biological uptake of uranium derivatives from a nuclear)
- Prairie Provinces, Canada (see Alberta; Manitoba; Saskatchewan)
- Predation (see also Feed; Parasites)
J 32(5): 623 (system simulation of activities of sea lampreys upon lake trout)
(8): 1419 (size selective, by young chum salmon, Puget Sound, Wash.)
(9): 1589 (of goldfish on zooplankton of a small saline lake)
(10): 1785 (on & by yellow perch, L. Memphremagog, Que. & Vermont)
(10): 1860 (dorsal light response as index of bluegill length of prey preference)
(12): 2530 (crustacean plankton communities re their variation with predation)
S 2035 (young Atl. salmon territorial behavior reduces predation by brook trout)
- Prediction (see Forecasting)
- Preservatives
J 32(3): 411 (toxicity of Na pentachlorophenate (a wood preservative) to salmonids)
- (10): 1745 (effects of, in assessing Hg contamination in old samples of fish)
- T 464 (see J 32(3) reference above)
- Pressick, Mary Lou
J 32(11): 2091 (genetic variation & structure of American lobster populations)
- Pressure, hydrostatic (see also Buoyancy; Swimbladder)
J 32(2): 271 (behavior responses of developing lobster larvae to changes of)
(12): 2441 (possible role of discontinuities in, re trout selection of flow patterns around bottom obstacles)
(12): 2559 (re functional hematology of ringed seal during sustained or deep dives)
- Prey (see Feed; Predation)
- Prickleback, black (*Xiphister atropurpureus*)
J 32(10): 1687 (seasonal shifts in nature of spawning site)
- Primary production (see Productivity, primary)
- Prince Edward Island (Province (P.E.I.), Canada)
T 504; 566 (alphabetical lists of freshwater bodies, keyed to bibliography of further 1000 references to Canadian limnology & fisheries)
- Princess Louisa Inlet (see Inlets)
- Probability distributions
S 2062 (comparison of)
- Processing of fishery products (see Fishery products)
- Productivity (see also Fecundity; also next two headings)
J 32(10): 1799 (of fish re detritus & detritus-associated invertebrates in a new reservoir)
S 2075 (efficiency in marine planktonic communities)
- Productivity, primary (see also Algae; Biomass; Chlorophyll; Nutrients, aquatic; Phytoplankton; Radiation)
J 32(1): 72 (inhibition of, through heterotrophic organisms competition for nitrate in stratified estuarial waters of Alberni Inlet, B.C.)
(12): 2413 (Babine L., B.C.)
T 523 (mathematical representation & prediction of phytoplanktonic)
524 (in waters of shelf area & Georges Bank, off N.S.)
525 (re chlorophyll production, L. Superior, May-Nov. 1973)
548; 553 (of some waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
559; 560 (lakes of Experimental Lakes Area, NW Ont.)
S 2051 (in fresh water re nutrients & latitude effect on solar radiation)
2054 (in arctic S Beaufort Sea)
2075 (re production efficiency in marine planktonic communities)

- Productivity, secondary (see also Bioenergetics; Feed; Plankton, Zooplankton)
T 2075 (re production in marine planktonic communities)
- Productus hibernicus* (see Brachipoda)
- Progesterone (see Hormones)
- Propagation (see also Aquaculture; Culture)
J 32(8): 1465 (artificial, as investigated by FRBC (summary))
T 562 (natural vs. artificial, re selective processes present in natural production cycle of salmonids)
- Propulsion (see Swimming)
- Prosopium coulteri* (see Whitefish, pygmy)
cylindraceum (see Whitefish, round)
williamsoni (see Whitefish, mountain)
- Protanypus* (see Chironomidae)
- Proteins (see also Amino acids; Composition, chemical; Muscle; Quality of fishery products)
J 32(1): 78 (levels of total, re Cu & Zn levels in plasma of spawning migratory sockeye salmon)
(6): 775 (cause of instability in minced flesh from fillets & frames of several Atl. marine fishes during storage at -5°C)
(9): 1629 (solubilization of Atl. cod myofibrillar, by Na pyruvate during frozen storage)
S 2089 (fish protein concentrate from white barracudina)
A 328 (nutritive, as modification of fish protein concentrate to functional fish protein for food purposes)
- Protothaca staminea* (see Clam, Pacific littleneck)
- Protozoa (see Ceratomyxosis; Sporozoa)
- Proximate analysis (see Composition, chemical)
- Psettichthys melanostictus* (see Sole, sand)
- Pseudocalanus* (see Calanoida)
- Pseudomonas* (see Bacteria)
- Pseudopleuronectes americanus* (see Flounder, winter)
- Pseudorca crassidens* (see Whale, false killer)
- Pteropoda
S 2044 (assimilation, metabolism, & growth efficiency of *Clione limacina*)
- Ptychocheilus oregonensis* (see Squawfish, northern)
- Puffin, horned (*Fratercula corniculata*)
S 2013 (easternmost record: near Coppermine, N.W.T.)
- Puget Sound, Washington
J 32(8): 1419 (size selection of epibenthic prey by young chum salmon)
(8): 1439 (life history observations on the Puget Sound rockfish)
(10): 1723 (epizootiology of tumors in a population of young English sole)
- Pugettia gracilis* (see Crab, spider kelp)
producta (see Crab, kelp)
- Pulpmill effluents
J 32(1): 72 (re phytoplanktonic vs. heterotrophic organisms utilization of nitrate in stratified estuarial waters of Alberni Inlet, B.C.)
(3): 411 (dehydroabietic acid as reference toxicant for salmonid bioassays)
(6): 753 (effects of acute exposure to, on carbohydrate metabolism of young coho salmon during rest & exercise)
(6): 789 (effects on young coho salmon swimming performance)
(8): 1249 (isolation & identification of constituents toxic to rainbow trout)
(12): 2357 (blood cell count sensitivity in young coho salmon exposed to)
(12): 2528 (effect of bleached kraft, on survival of young coho salmon)
A 324 24 (effect on oysters of Malaspina Strait, B.C.)
- Pumpkinseed (*Lepomis gibbosus*) (pumpkinseed sunfish)
J 32(1): 88 (re hybridization with bluegill)
- Pusa hispida* (see Seal, ringed)
- Pyrrophyta (see Cryptophyceae)
- Pyruvate
J 32(8): 1329 (metabolic fate of, injected into fresh & ice-stored scallop adductor muscle)
(9): 1629 (sodium, re solubilization of Atl. cod myofibrillar proteins during frozen storage)

Q

- Quahog, northern (*Mercenaria mercenaria*)
J 32(10): 1767 (Hg & Fe uptake by cytosomes in mantle cells)
- Quahog, ocean (*Arctica islandica*)
S 2031 (adductor muscle ultrastructure)
- Quality of fishery products
J 32(2): 227 (antioxidants re oxidative deterioration control in canned lake whitefish)
(6): 747 (from blue whiting)
(6): 775 (cause of protein instability in minced flesh stored at -5°C from several Atl. marine fishes)

- (7): 1163 (inspection of whale meat & products, Norway)
- (8): 1450 (preheat treatment for improvement of frozen storage stability at -10 C in silver hake fillets & minced flesh)
- (8): 1465 (as investigated by FRBC (summary))
- (9): 1595 (superchilling temperature re deteriorative changes in stored posttrigor Atl. cod muscle & fillets)
- (11): 2039, 2047 (capelin stored in ice vs. refrigerated sea water)
- (12): 2333 (seasonal & environmental influences on various attributes of NE Atl. cod flesh as food)
- CHN 49 (rock crab meat recovered by meat separators)
- 51 (improved rancidity test)
- 52; 53 (rancidity development re frozen storage life of Atl. mackerel)
- 55 (enhancing pink color of salmonoid fish flesh)
- T 484 (Pac. salmon flesh before & after canning)
- 514 (survey & characterization of Canadian & imported commercially canned herring products)
- 536 (roe, flesh, canned flesh, & canned lightly smoked fillets, from Pac. herring stored at sea)
- 569 (B.C. herring roe under industrial processing conditions)
- 574 (formulated breaded product from deboned white sucker flesh & taste panel judging of)
- 575 (deboned flesh from various B.C. underutilized marine fishes)
- S 2056 (freshness of iced salmonids)
- Quebec (Province (Que.), Canada) (see also James Bay watershed hydroelectric project; Matamek River system; Memphremagog, Lake; Ottawa River; Saguenay River; St. Lawrence, Gulf of; St. Lawrence River)
- J 32(1): 196 (table of details of some 30 reservoirs for hydroelectric projects)
- (11): 2214 (seasonal fat content changes in yellow perch of 2 Laurentian lakes)
- T 504; 566 (alphabetical lists of freshwater bodies, keyed to bibliography of further 1000 references to Canadian limnology & fisheries)
- Queen Charlotte Sound; Queen Charlotte Strait, and parts of Hecate Strait, B.C.
- J 32(9): 1561 (annual & longer-term variations of deep-water properties, Q.C. Strait)
- T 497 (Pac. ocean perch biomass & bottom-water temperature monitoring, also catches of fishes, Sept. 1974 survey)
- Quillback (*Carpiodes cyprinus*) (quillback carpsucker)
- J 32(10): 1799 (production in a new S Carolina impoundment)
- Quinlan, A. V.
- J 32(10): 1693 (seasonal water masses characteristics in Muir Inlet, Alaska, a fjord with tidewater glaciers)
- R
- Radiation, solar (see also Photosynthesis)
- T 523 (mathematical representation of various relations to phytoplanktonic photosynthesis)
- 559; 560 (extinction coefficients in waters; penetration through ice & snow cover; re photosynthesis & primary production of phytoplankton in waters of Experimental Lakes Area lakes, NW Ont.)
- S 2051 (latitude effect, re primary production in fresh water)
- 2054 (turbid waters of arctic S Beaufort Sea effect on, re primary productivity)
- Radioactivity; Radioactive isotopes (see Power plants; Uranium; references to ⁶³Zn under Zinc) (Note: References to the many uses of ¹⁴C as a radioactive tracer are not indexed separately; see note to heading Carbon)
- Raft (see Aquaculture; Mariculture; Pen, fish)
- Rain
- T 564 (chemistry of, at Carnation Creek, Vancouver Is., B.C., a Pac. Ocean coastal rain forest area)
- Raja binoculata* (see Skate, big)
- ocellata* (see Skate, winter)
- radiata* (see Skate, thorny)
- Ramamoorthy, S.
- J 32(10): 1755 (heavy-metal binding components of river waters near Ottawa, Ont.)
- Rancidity
- CHN 51 (an improved thiobarbituric acid (TBA) test for, in foods)
- 52 (proposed index of, for assessing storage life of frozen whole mackerel, and application of index to muscle & skin)
- 53 (rapid development in skin of frozen Atl. mackerel)
- Range, extension of (see Species, new records or range extensions of)
- Rangifer tarandus* (see Caribou)
- Rat, white (*Rattus norvegicus*)
- S 2058 (myocardial alterations from feeding partially hydrogenated fish oils & peanut oil)
- Ratfish (*Hydrolagus coliei*)
- T 497 (taken during groundfish survey, Queen Charlotte Sound area., B.C., 1974)
- 575 (yield & composition of deboned flesh from headed & gutted)
- Ration (see Aquaculture; Diet; Feed)
- Rattus* (see Rat, white)

- Raven, sea (*Hemitripterus americanus*) (a fish)
 T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
 S 2038 (pentachlorophenol in N.B.)
- Reactions of organisms to stimuli (*see* Stimuli)
- Records, new (*see* Species, new records or range extensions of)
- Recruitment (*see also* Mortality; Populations; Stocks)
 J 32(8): 1305 (re spatial model for an exploited shellfish population, e.g. scallop)
 (8): 1369 (sockeye salmon, Skeena R., B.C.)
 (9): 1613 (role of stock biomass & temperature in, of S Gulf of St. Lawrence cod)
- Redfish (*Sebastes marinus*) ((Atl.) ocean perch)
 T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
 526 (current status of stocks & recent annual catches in ICNAF areas)
 S 2058 (myocardial effects on rats when fed unprocessed or partially hydrogenated oil from)
- Redhorse, silver (*Moxostoma anisurum*)
 J 32(10): 1799 (production in a new S Carolina impoundment)
- Redhorse, smallfin (*Moxostoma robustum*)
 J 32(10): 1799 (production in a new S Carolina impoundment)
- Redmouth disease
 J 32(12): 2429 (establishment of an asymptomatic carrier state infection of enteric, in rainbow trout)
- Reduction (*see also* Meals; Wastewaters)
 J 32(7): 1083 (of Norwegian small whales to meal & oil)
 CNG 100 (of B.C. herring products)
 T 542 (B.C. commercial groundfish fishery catches for, 1974)
- Refinery (*see* Oils, petroleum)
- Reforestation (*see* Forestry)
- Refrigerated sea water (*see* Sea water, refrigerated)
- Refrigeration (*see also* Chilling; Ice; Quality of fishery products; Sea water, refrigerated; Superchilling)
 J 32(6): 747 (of blue whiting & some products therefrom)
 (6): 775 (protein instability in minced flesh stored at -5 C from several Atl. marine fishes)
 (8): 1450 (preheat treatment for improvement of frozen storage stability at -10 C in silver hake fillets & minced flesh)
 (9): 1629 (Na pyruvate effect on solubilization of Atl. cod proteins during frozen storage)
 T 536; 569 (B.C. herring re quality of processed roe therefrom)
- CHN 52; 53 (re rancidity development in skin & flesh of frozen-stored Atl. mackerel)
- Refsum's syndrome
 S 2071 (desirability of restricting fishery products in diet of patients to those having a low lipid content of phytanic acid)
- Regier, Henry Abraham
 J 32(10): 1887 (perspective on science for Canada's shelf-seas fisheries)
- Regier, Lloyd Wesley
 A 328 (functional & nutritive food proteins from fish)
- Regressions, linear (*see also* Mathematical treatment of data)
 J 32(8): 1491 (comments on an article in this Journal (J 30(3): 409 (1973))
 (8): 1494 (note concerning above comments)
 B 191: 351 (appendix on linear regression coefficients used in that Bulletin)
- Regulations (*see also* International Commissions; Law; Management)
 J 32(10): 1887 (perspective on science for Canada's shelf-seas fisheries)
- Reid, Ronald Allan
 T 559 (light extinction coefficients & secchi disc data at various depths in various Experimental Lakes Area (ELA) lakes, NW Ont., 1969-73, re primary production)
 560 (phytoplankton production in ELA, 1969-72; also light penetration measuring under ice & snow)
- Reinhardtius hippoglossoides* (*see* Halibut, Greenland)
- Renal metabolism (*see* Kidney)
- Renfro, William Charles
 J 32(8): 1339 (relative importance of feed & water in ⁶⁵Zn accumulation by marine biota)
- Reproduction (*see also* Development; Eggs; Embryo; Fecundity; Gonads; Hormones; Maturity; Ovary; Spawning; *also* names of organisms)
 J 32(1): 65 (progesterone concentrations during northern fur seal early pregnancy)
 (3): 427 (re dynamics of exploited lake whitefish populations & their management, particularly in N.W.T.)
 (6): 821 (perspective proposal & definition for classification of fishes by reproductive guilds, exemplified by descriptions & illustrations of Canadian & European species (not indexed separately in this index; (corrections on J 32(8): 1505))
 (7): 1041 (narwhal, E Canadian waters)
 (7): 1073 (cycles of Franciscana dolphin)

- (10): 1733 (environmental effects on W Lake Erie yellow walleye)
- (12): 2399 (insemination & parturition seasons of 31 *Sebastes* species of NE Pac.)
- S 2039 (in seals)
- 2043 (morphology of female Chironomidae genitalia)
- A 324 (effect of metal derivatives on)
- Research and Development (governmental)
 - J 32(8): 1465 (perspective re 75 years of Fisheries Research Board of Canada's achievements)
 - (10): 1887 (perspective re science for Canada's shelf-seas fisheries)
 - S 2023 (organizational impediments to effective environmental impact research)
- Research on high seas (freedom of) (see International Law of the Sea)
- Reservoirs (see also Dams; Hydroelectric projects)
 - J 32(1): 97, 98(E & F), 101, 106, 117, 126, 136, 161, 171, 177, 196 (perspectives re a symposium on environmental impact assessment & hydroelectric projects — hindsight & foresight in Canada)
 - (1): 196 (table of details of some 90 for power development, etc. in Canada)
 - (11): 2137 (estimates of potential fish yield (e.g. *Tilapia nilotica*) from Nasser Reservoir consisting of L. Nasser (Egypt), & L. Nubia (Sudan))
- Resources (see also Abundance; Exploitation; Management; Stocks)
 - J 32(10): 1887 (perspective on science for Canada's shelf-seas fisheries)
 - (12): 2569 (re international joint ventures in fishing & 200-mile economic zones)
 - CNG 100 (Pac. herring in B.C.)
 - T 526 (Canadian & USA Atl. offshore groundfish stocks & fisheries under ICNAF jurisdiction: 1975 status)
 - 509; 561; 568 (B.C. kelp)
 - 536; 569 (B.C. herring roe for Japanese market)
 - A 325 (marine offshore renewable, re their management)
- Respiration (see also Blood; Gills; Metabolism; Operculum; Oxygen, dissolved;
 - J 32(9): 1607 (& chemical composition of red crab re energetics in an upwelling system)
 - S 2040 (metabolism of sea urchin under laboratory-simulated summer & winter temperatures)
 - 2044 (rate of *Cione limacina* pteropod)
 - A 324 (effects of some metal derivatives on)
- Response, conditioned (see Learning)
- Response of organisms to chemicals (see Chemoreception; Toxicants; also names of organisms, chemical elements, & chemical compounds)
- Response of organisms to physical conditions (see Light, reaction to; Temperature, biological effects of & reaction to; etc.; also names of organisms)
- Retina (see Eye)
- Review papers (mainly when so-called in their titles) (see also Bibliographies; Perspectives)
 - J 32(11): 1943 (gillnet selectivity)
 - (11): 2231 (biological oceanography in Canada)
 - (12): 2295 (minimal dissolved oxygen requirements & tolerances of Canadian aquatic life)
 - (12): 2333 (seasonal & environmental influences on various attributes of NE Atl. cod flesh as food)
 - T 487 (toxicity of drilling fluid components to aquatic biological systems)
 - 488 (effects of metal mines effluents on Canadian aquatic ecosystems)
 - 489 (effects of Canadian textile industry effluents on aquatic organisms)
 - 527; 528; 529; 530 (effects of hydroelectric developments on biology of: lake whitefish; northern pike, yellow walleye; lake trout)
 - S 2020 (microdermination of mercury & organomercury in environmental materials)
 - 2069 (lipolytic enzymes)
 - 2088 (marine lipids & fatty acids in human nutrition)
 - A 324 (some biological concerns in heavy metals pollution)
- Reviews of books (see also Books received)
 - J 32(1): 211 (Parasites of freshwater fishes — a review of their control and treatment)
 - (2): 325 (The urohyal in fishes); (Diseases of fish)
 - (2): 326 (Shallow-water gammaridean Amphipoda of New England)
 - (3): 449 (The management of marine fisheries)
 - (4): 571 (Genetic studies of fish)
 - (5): 719 (The shell makers, introducing mollusks)
 - (5): 720 (Sea fisheries research)
 - (6): 865 (Netting materials for fishing gear)
 - (6): 866 (Modern inshore fishing gear — rigging and mending)
 - (6): 867 (The poisons around us. Toxic metals in food, air, and water)
 - (8): 1499 (Color atlas of the diseases of fishes, amphibians and reptiles)
 - (8): 1500 (Fisheries of the North Pacific); (Algal physiology and biochemistry)
 - (8): 1501 (Pollution ecology of freshwater invertebrates)
 - (9): 1671 (Freedom of oceanic research)
 - (9): 1672 (Genetics and mutagenesis of fish)
 - (9): 1673 (Modelling the eutrophication process)
 - (9): 1674 (Chemoreception in marine organisms); (Fish immunology)
 - (10): 1933 (The early life history of fish)
 - (10): 1934 (Coupling of land and water systems)
 - (11): 2285 (Fisheries and energy production. A Symposium)
 - (11): 2285 (Population and community ecology: principles and methods)

- (12): 2581 (Experimental marine biology)
 (12): 2582 (The salmon: their fight for survival)
 (12): 2582 (The inland waters of tropical Africa. An introduction to tropical limnology)
 (12): 2584 (The benthos of lakes)
 (12): 2584 (The blackbass in America and overseas)
 (12): 2585 (Light's manual: intertidal invertebrates of the central California coast)
 (12): 2586 (Culture of bivalve molluscs: 50 years experience at Conwy [Conway, Wales])
 (12): 2586 (Optimum sustainable yield as a concept in fisheries management)
 A 321 (Oceanography, contemporary readings in ocean science)
 327 (Parasites and diseases of fishes and aquatic invertebrates)
- Rhinichthys cataractae* (see Dace, longnose)
- Rhodophyta
 S 2087 (L-isoleucine effects on L-threonine deaminase activity of *Porphyridium cruentum*)
- Rice, Stanley D.
 J 32(11): 2221 (effect of water-soluble fraction of crude petroleum oil on pink salmon fry opercular rates)
- Richardsonius balteatus* (see Shiner, redbelt)
- Richey, Jeffrey Edward
 J 32(6): 817 (kokanee salmon decomposition effects on subalpine stream ecology)
- Ricker, William Edwin
 J 32(8): 1369 (revised interpretation of Skeena R., B.C., sockeye salmon catches)
 (8): 1465 (perspective re 75 years of Fisheries Research Board of Canada's achievements)
 (8): 1494 (a note concerning comments by P. Jolicoeur (page 1491) re linear regression in fisheries research)
 B 191 (computation & interpretation of biological statistics of fish populations)
 S 2061 (synopsis of the Brachypterinae stoneflies, with newly described species of several new genera; key to N American genera & species)
- Rigler, Frank Harold
 J 32(9): 1519 (predicting development capacity of a lake by lake trophic status)
- Rivers (see also Dams; Estuaries; Hydroelectric projects; also names of rivers given in headings for Canadian provinces and territories, and some USA states)
 J 32(10): 1755 (heavy-metal binding components of river waters)
 T 504; 566 (lists of Canadian, keyed to further 1000 references to limnology & fisheries (first 1000 references were in T 471 (1974))
 545-557 (many Yukon & western N.W.T., re oil pipeline & highway projects)
- Rivers, diversion of waters from (see Diversion of rivers)
- Roberts, Morris H.
 J 32(12): 2525 (acute toxicity of chlorine in estuarial waters to several invertebrates & fish species)
- Roberts Bank, B.C. (off Fraser River mouth)
 T 468 (zonation of intertidal biomass & related benthic data)
- Robson, Douglas Sherman
 J 32(12): 2365 (estimating survival rate from tag returns from angler-caught fish)
- Rockfish, aurora (*Sebastes aurora*)
 T 565 (length re age, geographically in NE Pac. Ocean)
- Rockfish, black (*Sebastes melanops*)
 T 542 (catch & effort statistics of B.C. commercial groundfish fishery, 1974 data record)
 565 (length re age, geographically in NE Pac. Ocean)
- Rockfish, canary (*Sebastes pinniger*)
 T 497 (catches during B.C. groundfish & midwater fish schools survey, Queen Charlotte Strait & Sound, Hecate Strait, & Johnstone Strait, B.C., 1974)
 542 (catch & effort statistics of B.C. commercial groundfish fishery, 1974 data record)
 565 (length re age, geographically in NE Pac. Ocean)
 575 (yield & composition of deboned flesh from headed & gutted)
- Rockfish, copper (*Sebastes caurinus*)
 T 542 & 565 (as for Rockfish, canary, above)
- Rockfish, darkblotched (*Sebastes crameri*)
 T 497 & 542 & 565 (as for Rockfish, canary, above)
- Rockfish, dusky (*Sebastes ciliatus*)
 T 497 (as for Rockfish, canary, above; also range extension northward)
 565 (as for Rockfish, canary, above)
- Rockfish, greenstriped (*Sebastes elongatus*)
 T 497 & 542 & 565 (as for Rockfish, canary, above)
- Rockfish, Puget Sound (*Sebastes emphaeus*)
 J 32(8): 1439 (life history observations on a concentration of, in Puget Sound)
- Rockfish, pygmy (*Sebastes wilsoni*)
 T 565 (as for Rockfish, canary, above)
- Rockfish, quillback (*Sebastes maliger*)
 T 542 & 565 (as for Rockfish, canary, above)
- Rockfish, redbanded (*Sebastes babcocki*)
 T 497 & 542 & 565 (as for Rockfish, canary, above)

- 575 (yield & composition of deboned flesh from headed & gutted)
- Rockfish, redstripe (*Sebastes proriger*)
T 496; 503 (catches during B.C. herring surveys, offshore SW Vancouver Is., 1962 & 1963; Juan de Fuca Strait, 1971)
497 & 542 & 565 (as for Rockfish, canary, above)
- Rockfish, rosethorn (*Sebastes helvomaculatus*)
T 497 & 542 & 565 (as for Rockfish, canary, above)
- Rockfish, rougheye (*Sebastes aleutianus*)
T 497 & 542 & 565 (as for Rockfish, canary, above)
- Rockfish, sharpchin (*Sebastes zacentrus*)
T 497 & 542 & 565 (as for Rockfish, canary, above)
575 (yield & composition of deboned flesh from headed & gutted)
- Rockfish, shortbelly (*Sebastes jordani*)
T 565 (as for Rockfish, canary, above)
- Rockfish, shortraker (*Sebastes borealis*)
T 497 & 565 (as for Rockfish, canary, above)
- Rockfish, silvergray (*Sebastes brevispinis*)
T 496 (catches during B.C. herring surveys, offshore SW Vancouver Is., 1972 & 1973)
497 & 542 & 565 (as for Rockfish, canary, above)
575 (yield & composition of deboned flesh from headed & gutted)
- Rockfish, speckled (*Sebastes ovalis*)
T 542 (as for Rockfish, canary, above)
- Rockfish, splitnose (*Sebastes diploproa*)
T 497 & 542 & 565 (as for Rockfish, canary, above)
- Rockfish, stripetail (*Sebastes saxicola*)
T 497 & 565 (as for Rockfish, canary, above)
- Rockfish, tiger (*Sebastes nigrocinctus*)
T 496 (as for Rockfish, silvergray, above)
- Rockfish, widow (*Sebastes entomelas*)
T 496; 503 (as for Rockfish, redstripe, above)
497 & 542 & 565 (as for Rockfish, canary, above)
575 (yield & composition of deboned flesh from headed & gutted)
- Rockfish, yelloweye (*Sebastes ruberrimus*)
T 497 & 542 & 565 (as for Rockfish, canary, above)
- Rockfish, yellowmouth (*Sebastes reedi*)
T 497 & 542 & 565 (as for Rockfish, canary, above)
- Rockfish, yellowtail (*Sebastes flavidus*)
T 496; 503 (as for Rockfish, redstripe, above)
497 & 542 & 565 (as for Rockfish, canary, above)
- Rockfishes
J 32(12): 2399 (reproduction, maturation, & larvae identification of 31 *Sebastes* species in NE Pac. (details of species not available from abstract only))
- Rockling, fourbeard (*Enchelyopus cimbrius*)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Roe (see also Eggs)
J 32(9): 1643 (utilization of lumpfish wastes after separation of roe)
CNG 100 (commercial utilization from Pac. herring for Japanese market)
T 536 (storage of Pac. roe herring at sea by chilling, to preserve quality of contained roe)
569 (quality & quantity from B.C. herring under industrial processing conditions)
- Roeder, Donald Richard
T 552 (effects of Norman Wells crude oil on periphyton in selected N.W.T. lakes & rivers)
- Rosenberg, David Michael
T 547 (ecology of aquatic organisms re sedimentation in Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) drainages)
548; 549 (effects of experimental spills of crude oil on 3 Mackenzie R. delta lakes)
550 (effects of Norman Wells (N.W.T.) crude oil experimental spill into a N Yukon stream on zoobenthos of latter 1 year later)
551 (effects of crude oil on colonization of artificial substrates by zoobenthos organisms)
552 (effects of Norman Wells crude oil on periphyton in selected N.W.T. lakes & rivers)
557 (species list of aquatic plants & animals collected from waters of Mackenzie & Porcupine rivers systems, 1971-73)
S 2042 (Chironomidae as indicators of macroinvertebrate diversity in pesticide pollution study)
- Rosenthal, Harold
S 2007 (temperature & salinity influence on garfish embryonic development, larval growth, & vertebral number)
- Ross, Avron John
J 32(9): 1648 (a fungal plant saprophyte, *Phoma herbarum*, as a fish pathogen)
- Ross, G. J. B.
J 32(7): 1005 (new records of pygmy right whales from S. Africa, with comments on their distribution, migration, appearance, & behavior)
- Ross, Herbert Holdsworth
S 2061 (synopsis of the Brachypterinae stoneflies, with descriptions of several new genera)
- Rotifera
T 557 (of Mackenzie R. delta waters, N.W.T.)

Rowe, Gilbert Thomas

- J 32(9): 1607 (respiration & chemical composition of red crab re energetics)
 (10): 1805 (benthic fauna in Gulf of Maine deep basins)

Royce, William Francis

- J 32(8): 1500 (review of book on N Pac. fisheries)

Rubidium derivatives

- A 324 (environmental pollutive potential & toxicity re biological uptake (review))

Rudd, John William McCullagh

- S 2010 (measuring microbial oxidation of methane in lake water)

Ruggles, Charles Paul

- J 32(1): 161 (ecological changes from hydroelectric development on Saint John R., N.B.)

Rumsey, Gary Leroy

- J 32(3): 422 (amino acid supplementation of casein & soybean meal in diets for young Atl. salmon & rainbow trout)

Rupert Inlet, Vancouver Island, B.C.

- T 506 (chemical delineation of a submerged mine tailings plume)

Russo, Rosemarie Catherine

- J 32(12): 2379 (pH & temperature effect on aqueous NH_3 equilibrium)

Ryan, P.

- T 544 (raft for 5 mariculture nets)

Ryder, Richard Armitage

- J 32(11): 2137 (estimates of potential fish yield for Nasser Reservoir, Egypt)

S

Saanich Inlet, B.C. (see Inlets)

Sablefish (*Anoplopoma fimbria*)

- T 497 (catches during groundfish survey, Queen Charlotte Sound area, Sept. 1974)
 542 (catches & effort in B.C. commercial groundfish fishery: 1974 data record)

Sæther, Ole Anton

- J 32(2): 259 (2 new species of, & keys to, Nearctic & Palaearctic *Heterotanytarsus* chironomids)
 (3): 367 (as above, for *Protanypus* chironomids)
 B 193 (Nearctic & Palaearctic *Heterotrissocladius* chironomids)
 S 2043 (Chironomidae genitalia morphology & terminology)

Sagitta (see Chaetognatha)

Saguenay River, Que.

- J 32(12): 2373 (penetration of deep-layer water of fjord by surface water of St. Lawrence R. estuary, re high chlorophyll values of former)

Saint John River, N.B.

- J 32(1): 161, 196 (ecology changes from hydroelectric development)
 (5): 653 (evidence for homing to tributaries, by spawning American shad)

St. Note: Headings commencing with St. follow alphabetically after the heading Squid, short-finned.

Sakaguchi, Morihiko

- J 32(8): 1329 (metabolic fate of injected pyruvate in fresh & ice-stored scallop muscle meats)

Salicylanilide

- J 32(4): 515 (metabolism of a dichloronitro derivative (Bayer 73 lampicide) in rainbow trout)

Salinity (see also Lakes, saline; Oceanography (Note: Routine salinity data for waters are not indexed herein))

- J 32(9): 1561 (annual & longer-term variations of S B.C. coastal deep-water)
 (10): 1693 (seasonal variations in an Alaskan inlet with tidewater glaciers)
 (10): 1821 (failure of environmental, to influence Atl. salmon growth)
 (12): 2564 (effect on 2 arctic amphipods)
 S 2007 (effects on embryonic development, larval growth, & vertebral number of garfish)

Salmo clarki (*clarki*) (see Trout, cutthroat)*gairdneri* (see Trout, rainbow; Trout, steelhead)*salar* (see Salmon, Atlantic)*trutta* (see Trout, brown)

Salmon (Pacific in general) (Note: In addition to the publications referred to under the following Salmon headings for the *Oncorhynchus* species (commonly called chinook, chum, coho, pink, and sockeye) some publications refer to all these species in general, or do not mention the species investigated. Such references are given below. See also Kokanee; Salmonidae)

- J 32(1): 126 (re ecological consequences of proposed Fraser R. Moran Dam on)
 (9): 1663 (terminology of intervals & stages of development to death)
 (11): 2179 (methodology for a case study of, re new techniques for policy evaluation in ecological systems)
 (12): 2538 (edema in spawning, & its probable role in post-spawning death)
 (12): 2582 (history of fight for survival (book review))
 T 541; 543 (rearing in sea pens; details of an experimental fishfarm sea pen)
 562 (research problems in B.C. stream ecology)
 MSP 27 (practical guide to anatomy & physiology)

- S 2006 (apparatus for collecting & analyzing volatiles in headspace of canned)
- Salmon, Atlantic (*Salmo salar*)
- J 32(1): 1 (temperature re acute toxicity of Zn to)
- (2): 307 (taken in sea, N Labrador)
- (3): 422 (amino acid supplementation of casein in fingerling diet)
- (4): 559 (dummy telemetry transmitters effect on swimming stamina of smolts)
- (5): 643 (pectoral fin & opercular movements of alevins)
- (9): 1652 (selection of shade by young re water depth)
- (9): 1663 (terminology of intervals & stages of development)
- (10): 1813 (dietary sodium chloride effect on growth)
- (11): 2069 (abundance & population dynamics of parasites infecting, in Trout Brook, N.B.)
- (12): 2552 (Zn uptake when exposed to lethal Zn concentration at 3 temperatures)
- (12): 2582 (history of fight for survival (book review))
- MSP 27 (practical guide to anatomy & physiology of, similar to that of Pac. salmon)
- S 2018 (malic enzymes in spermatozoa)
- 2033 (chopped Atl. herring as dietary component for culture of)
- 2038 (pentachlorophenol in young N.B.)
- 2049 (toxicity of thallium alone or with copper or zinc, to young in some N.B. streams)
- Salmon, chinook (*Oncorhynchus tshawytscha*) (king or spring salmon) (see also Salmon (Pacific in general))
- J 32(1): 126 (possible ecological consequences of proposed Fraser R. Moran Dam on)
- (9): 1553 (water temperature re infection by *Flexibacter columnaris* (columnaris disease))
- (9): 1648 (a fungal plant saprophyte, *Phoma herbarum*, pathogenic to)
- T 496; 503 (catches, biological data, & stomach contents of, as taken during B.C. herring surveys, offshore SW Vancouver Is., 1972 & 1973; Juan de Fuca Strait, 1971)
- 537 (residence duration, population size, & growth, of juvenile in Nanaimo R. estuary, B.C.)
- MSP 27 (practical guide to anatomy & physiology)
- S 2052 (starvation vs. feeding effects on scale circulus formation, scale nucleus size re egg size, fish length & weight, in young)
- Salmon, chum (*Oncorhynchus keta*) (see also Salmon (Pacific in general))
- J 32(5): 633 (spawning behavior in laboratory flumes)
- (8): 1419 (size selection of epibenthic prey by young, Puget Sound, Wash.)
- (9): 1640 (*Ceratomyxa shasta* myxosporidian disease in B.C. young)
- Salmon, coho (*Oncorhynchus kisutch*) (silver salmon) (see also Salmon (Pacific in general))
- J 32(2): 321 (estimating dry weight of live, unanesthetized fingerlings by photography)
- (3): 411 (Na pentachlorophenate & dehydroabietic acid as reference toxicants for standardizing bioassays)
- (5): 667 (aspects of winter ecology of young in a stream)
- (5): 681 (preferences of young re simulated alteration of winter habitat)
- (6): 753 (pulpmill effluent effects on carbohydrate metabolism of young during rest & exercise)
- (6): 789 (pulpmill effluent effects on swimming performance of young)
- (9): 1545 (water temperature re ceratomyxosis in)
- (9): 1553 (water temperature re infection by *Flexibacter columnaris* (columnaris disease))
- (9): 1640 (presumptive ceratomyxosis in a B.C.)
- (9): 1648 (*Phoma herbarum*, a fungal plant saprophyte, pathogenic to)
- (10): 1873 (renal excretion after acute exposure to TFM lampricide)
- (12): 2528 (effect of pulpmill effluent on survival of starved young)
- (12): 2357 (sensitivity of blood cell counts in young, when stressed by exposure to pulpmill effluent & zinc)
- (12): 2542 (seaward movement of young re lunar cycle, Lymn Creek, Vancouver Is., B.C.)
- T 464 (see J 32(3) reference above)
- 483 (movements of populations in Lymn Creek, Vancouver Is., 1971-72)
- 484 (instrumental color sorting of flesh before & after canning)
- 501 (effects of winter starvation & feeding on growth & survival of cultured young)
- 515 (purse-seine catches of young, Babine L., B.C., 1973 data record)
- MSP 27 (practical guide to anatomy & physiology)
- S 2041 (determining lipid content of muscle in whole fish by ultrasonics)
- S 2052 (starvation vs. feeding effects on scale circulus formation, scale nucleus size re egg size, fish length & weight, in young)
- Salmon, pink (*Oncorhynchus gorbuscha*) (see also Salmon (Pacific in general))
- J 32(3): 402 (occurrence in L. Huron)
- (11): 2221 (effect of water-soluble fraction of crude petroleum oil on opercular rates of fry)
- (12): 2343 (evaluation of transplantations from B.C. to Nfld.)
- T 484 (attempted instrumental flesh color sorting not satisfactory)
- S 2066 (culture of pan-size, using environmental control)
- Salmon, red (see Salmon, sockeye)
- Salmon, king (see Salmon, chinook)
- Salmon, kokanee (see Kokanee)

Salmon, silver (see Salmon, coho)

Salmon, sockeye (*Oncorhynchus nerka*) (red salmon) (see also Salmon (Pacific in general); also Kokanee)

J 32(1): 11 (thiourea effects on sexually maturing vs. gonadectomized male)

(1): 78 (Cu, Zn, & total protein levels in plasma of spawning migratory)

(1): 126 (possible ecological consequences of proposed Fraser R. Moran Dam on)

(2): 233 (movements in Skeena R. estuary, B.C., by ultrasonic tracking)

(3): 411 (Na pentachlorophenate & dehydroabietic acid as reference toxicants for standardizing bioassays)

(4): 533 (corticosteroid concentrations in, after exposure to low cupric concentrations)

(8): 1369 (revised interpretation of history of Skeena R. catches)

(10): 1777 (optimal harvest strategies for Skeena R., re environmental variability & uncertain production parameters)

(11): 2103 (growth rate of young, re fish size & ration level)

(11): 2179 (methodology for a case study of Skeena R. fishery, re new techniques for policy evaluation in ecological systems)

(12): 2413 (carcasses as contributing to phosphorus content of Babine L., B.C.)

(12): 2479 (daily pattern of nitrogen excretion (as urea & NH₃) & of oxygen consumption, by young under controlled conditions)

T 464 (see J 32(3) reference above)

484 (instrumental vs. visual color sorting of flesh color of raw vs. canned, from different B.C. coast localities)

515 (purse-seine catches of young, Babine L., B.C., 1973 data record)

MSP 27 (practical guide to anatomy & physiology)

S 2052 (starvation vs. feeding effects on scale circulus formation, scale nucleus size re egg size, fish length & weight, in young of 4 racial origins)

2056 (correlation between freshness of iced & lactic acid formation in muscle extracts)

2066 (culture of pan-size, using environmental control)

Salmon, spring (see Salmon, chinook)

Salmon, steelhead (see Trout, rainbow; Trout, steelhead)

Salmonidae (see also names of genera and common names of species)

J 32(2): 243 (metabolic studies of an amphipod re its trophic position & aquaculture in feed web of young salmonids)

(3): 411 (Na pentachlorophenate & dehydroabietic acid as reference toxicants for standardizing bioassays)

(9): 1663 (terminology of intervals & stages of development)

(11): 2224 (detection technique for bacterial kidney disease in)

CHN 55 (enhancement of flesh color by feeding fish oils)

T 464 (see J 32(3) reference above)

562 (research problems in B.C. stream ecology)

Salt (common) (see also Sodium derivatives)

J 32(10): 1813 (effect of dietary, on Atl. salmon growth)

(10): 1821 (failure of NaCl (as various seawater salinities) to influence Atl. salmon growth)

Salt-marsh cord grass (see Cordgrass, marsh)

Salvelinus alpinus (see Char, Arctic)

fontinalis (see Trout, brook)

namaycush (see Trout, lake)

Sameoto, Douglas Daniel

J 32(2): 310 (DDT residues in euphausiids in Gulf of St. Lawrence upper estuary (additional reference on J 32(8): 1505))

(3): 347 (tidal & diurnal effects on zooplankton sample variability)

Sampling

J 32(3): 347 (tidal & diurnal effects on zooplankton sample variability)

(5): 699 (simple & rapid technique for repeated, of rainbow trout blood)

(12): 2365 (determining size, for estimating fish survival rate by tag returns from anglers)

(12): 2520 (statistical bias problem in on-site surveys for catch & effort)

CNG 100 (B.C. herring catches)

T 481 ("slurp bottle," for floating films on surface waters; also bottle for near-surface waters)

545 (of natural waters for determination of low concentrations of suspended sediments)

S 2065 (precautions for estimating petroleum hydrocarbons contamination of waters)

Sand dollars

J 32(8): 1275 (arsenic uptake of *Echinarachnius parma* near effluent from a Nfld. mine)

MSP 26 (drawing of *Dendraster excentricus*, typical of Gulf Is. marine parks, B.C.)

Sand lance; Sand launce (see Lance)

Sanddab, mottled (*Citharichthys sordidus*)

T 542 (catches & effort in B.C. commercial groundfish fishery: 1974 data record)

575 (yield & composition of deboned flesh from headed & gutted)

Sandeman, Edwin John

A 322 (shrimps & shrimp fishing in Canadian Atl. provinces)

325 (offshore renewable resources & their management)

Sanders, James Edward

- J 32(9): 1553 (water temperature re *Flexibacter columnaris* infection in steelhead trout, coho & chinook salmon)

Sangalang, Gloria Josefina Balolong

- S 2057 (sublethal Cd effects in vitro on brook trout maturation, & testosterone & ketotestosterone production)

Saprophyte (see Fungus)

Saskatchewan (Province (Sask.), Canada) (see also Churchill River; Dams; Saskatchewan River)

- J 32(1): 101 (environmental impact assessment of 3 reservoirs & a proposed impoundment for hydroelectric projects — hindsight & foresight)
(1): 171 (impact of the Bennett Dam (B.C.) on the Peace-Athabasca rivers delta & L. Athabaska)
(1): 196 (table of details of 3 reservoirs for hydroelectric projects)
T 504; 566 (alphabetical lists of freshwater bodies, keyed to bibliography of further 1000 references to Canadian limnology & fisheries)

Saskatchewan River, Alta., Sask., & Man.

- J 32(1): 101 (hindsight & foresight re environmental impact analysis of 3 hydroelectric developments in Sask.)
(1): 196 (table of details of 4 reservoirs in Alta., Sask., & Man. re hydroelectric developments)

Sauces

- T 514 (composition of, in commercially canned hering products)

Saunders, Richard Lee

- J 32(10): 1813 (effect of dietary sodium chloride on Atl. salmon growth)
(10): 1821 (failure of environmental salinity to influence Atl. salmon growth)
S 2033 (Atl. herring as dietary component for Atl. salmon culture)

Saury, Atlantic (*Scomberesox saurus*)

- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)

Saxidomus giganteus (see Clam, butter)

Scales, fish

- CHN 99 (re steelhead trout age & freshwater-marine life)
T 567 (re age of cutthroat trout, Great Central L., Vancouver Is., B.C.)
S 2052 (feeding vs. starvation effects on circulus formation & nucleus size re egg size, fish length & weight, in young kokanee & Pac. salmon)

Scallop, giant (see Scallop, sea)

Scallop, sea (*Placopecten magellanicus*) (giant scallop)

- J 32(8): 1305 (spatial model re exploited population of Georges Bank fishery off N.S.)
(8): 1329 (metabolic fate of pyruvate injected into fresh & ice-stored adductor muscle)
T 532 (re effects of dragging gear on lobster bottoms near Pictou, N.S.)
S 2031 (adductor muscle ultrastructure)

Scarratt, David Johnson

- T 532 (observations on lobsters & scallops near Pictou, N.S.)

Scarsbrook, John Raymond

- T 515 (data record of purse-seine catches of sockeye salmon & other species at Babine L., B.C., 1973)

Scherer, Eberhard

- T 502 (whitefish & rainbow trout behavioral responses to drilling fluids)
S 2082 (goldfish avoidance of fenitrothion insecticide)

Schimmel, Steven Charles

- J 32(2): 314 (automatic brine shrimp feeder for aquatic bioassays)

Schmidt, Peter Joseph

- T 484 (instrumental color sorting of raw salmon in preparation for canning)

Schindler, David William

- J 32(9): 1673 (review of book on modelling the eutrophication process)
T 599 (light extinction coefficients & secchi disc data at various depths in various Experimental Lakes Area (ELA) lakes, NW Ont., re primary production in 1969-73)
560 (phytoplankton production in ELA, 1969-72; also light penetration measuring under ice & snow)
S 2022 (some causes & control of eutrophication)
2051 (primary production in fresh water)
2078 (nutrients in a small experimental NW Ont. lake)

Schmidt, Russel Van

- T 559 (light extinction coefficients & secchi disc data at various depths in various Experimental Lakes Area (ELA) lakes, NW Ont., re primary production, 1969-73)
560 (phytoplankton production in ELA, 1969-72; also light penetration measuring under ice & snow)

Schneider, Phillip William, Jr.

- J 32(8): 1289 (leucine aminonaphthylamidase localization in rainbow trout)
(11): 2153 (neuromuscular function & acetylcholinesterase inhibition by diisopropylfluorophosphate in largemouth bass pectoral abductor muscle)

- Scholl, Russell L.
J 32(10): 1733 (environmental effects on W Lake Erie walleye year-class strengths)
- Schools; Schooling (of fish)
J 32(9): 1533 (periscopic photographic method of determining 3-dimensional positions of fish in)
- Scina* (see Amphipoda)
- Scomber scombrus* (see Mackerel, Atlantic)
- Scophthalmus aquosus* (see Windowpane)
- Scorpaenidae (see Bocaccio; Perch, Pacific ocean; Redfish; Rockfish; Thornyhead; also *Sebastes*; *Sebastolobus*)
- Scotian Shelf (off N.S.)
J 32(4): 479 (incidence of American plaice trematode parasites re fish length & feed)
T 524 (phytoplankton production, nutrients, & density structure, Aug. 1974)
- Scott, B. F.
S 2074 (effect & fate of experimental crude oil spill into 2 Mackenzie R. delta lakes, N.W.T.)
- Scott, James Stuart
J 32(4): 479 (trematode incidence in Scotian Shelf & Gulf of St. Lawrence American plaice re fish length & feed)
(4): 547 (geographic variation in trematode incidence in NW Atl. American plaice)
- Scrivener, James Charles Edward
T 564 (water chemistry of Carnation Creek watershed, Vancouver Is., B.C., July 1971-May 1974)
- Sculpin, Arctic hookear (*Artedius uncinatus*)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Sculpin, coastrange (*Cottus aleuticus*)
J 32(1): 21 (re speciation of a similar freshwater *Cottus* population in L. Washington, Wash.)
T 483 (population movements in Lymn Creek, Vancouver Is., B.C., 1971-72)
- Sculpin, fourhorn (*Myoxocephalus quadricornis*)
J 32(11): 1989 (distribution, Great Bear L., N.W.T.)
- Sculpin, great (*Myoxocephalus polyacanthocephalus*)
J 32(5): 649 (new coccidia sporozoan, *Eimeria myoxocephali*, from)
- Sculpin, longhorn (*Myoxocephalus octodecemspinosus*)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Sculpin, mailed (*Triglops murrayi*)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Sculpin, prickly (*Cottus asper*)
T 483 (population movements in Lymn Creek, Vancouver Is., B.C., 1971-72)
515 (purse-seine catches, Babine L., B.C., 1973 data record)
- Sculpin, shorthorn (*Myoxocephalus scorpius*)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Sea anemones
J 32(10): 1805 (*Bolocera tuediae* in Gulf of Maine deep basins)
MSP 26 (illustrations of *Anthopleura elegantissima*, typical of Gulf Is. marine parks, B.C.)
- Sea cucumber (*Cucumaria frondosa*)
T 531 (harvesting, processing to meal, & meal composition, as possible substitute for Atl. herring meal in trout diets)
- Sea cucumber, burrowing (*Cucumaria miniata*)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Sea lion, California (*Zalophus californianus californianus*)
J 32(12): 2391 (Hg, Me-Hg, Cd, & chlorinated hydrocarbon residues in)
- Sea pen (see Aquaculture; Pen, sea)
- Sea raven (a fish) (see Raven, sea)
- Sea stars (see Brittle stars; Starfishes)
- Sea urchins (see also Heart urchin; Sand dollars)
J 32(8): 1275 (arsenic uptake of *Strongylocentrotus droebachiensis* near effluent from Nfld. mine)
MSP 26 (illustrations of purple (*S. purpuratus*) & red (*S. franciscanus*) of Gulf Islands, B.C., marine parks)
S 2040 (respiratory metabolism of laboratory-acclimated *S. droebachiensis*)
- Sea water (see also Adaptation; Currents; Oceanography; Salinity; Sea water, refrigerated; Tides)
J 32(4): 523 (effect on infectious pancreatic necrosis virus)
(4): 541 (incidence of *Vibrio parahaemolyticus* in Canadian Atl. maritime region)
(8): 1275 (arsenic dispersion in, near a continuous effluent source)
(8): 1339 (vs. feed re accumulation of ⁶⁵Zn by marine biota)
(10): 1821 (failure of environmental salinity to influence Atl. salmon growth)

- Sea water, refrigerated (RSW)
J 32(11): 2039, 2047 (vs. ice for storage of inshore male capelin)
- Sea weed (*see* Seaweeds)
- Seal, bearded (*Erignathus barbatus*) (square flipper seal)
J 32(6): 795 (mercury in, from Holman, N.W.T.)
(11): 2111 (polychlorinated biphenyls & DDT in tissues of Canadian arctic & subarctic)
T 507 (past, present, & future research in Canadian arctic)
- Seal, harbor (*Phoca vitulina*)
T 507 (past, present, & future research in Canadian arctic)
- Seal, harp (*Pagophilus groenlandicus*)
T 507 (past, present, & future research in Canadian arctic)
S 2039 (environment & reproduction re maturity)
- Seal, hooded (*Cystophora cristata*)
T 507 (past, present, & future research in Canadian arctic)
- Seal, northern fur (*Callorhinus ursinus*)
J 32(1): 65 (circulating progesterone concentrations during early pregnancy)
(12): 2447 (determining natural mortality through births, commercial kills, sex, & age)
- Seal, ringed (*Phoca hispida*) (*Pusa hispida*)
J 32(6): 795 (mercury in, from Holman, N.W.T.)
(11): 2111 (polychlorinated biphenyls & DDT in tissues of Canadian arctic & subarctic)
(12): 2559 (functional hematology re stress & deep or sustained dives)
T 507 (past, present, & future research in Canadian arctic)
S 2048 (DDT, DDE, & PCB levels in blubber of Canadian arctic)
- Seal, square flipper (*see* Seal, bearded)
- Seals
B 190 (hydrodynamics & energetics of propulsion (not indexed separately; *see* its indexes))
S 2039 (environment & reproduction)
- Season effects (*see also* Radiation; Summerkill; Temperature; Winterkill)
J 32(1): 66 (on maturation & spawning of S Gulf of St. Lawrence herring)
(3): 347 (on zooplankton sampling variability in nearshore marine environment)
(5): 615 (on Atl. coast eelgrass chemistry)
(5): 667, 681 (winter ecology & habitat re young coho salmon & young steelhead & cutthroat trout)
(10): 1687 (on black prickleback nature of spawning sites)
(10): 1693 (on water masses characteristics in Muir Inlet, Alaska, a fjord with tidewater glaciers)
(11): 2069 (re abundance of parasites infecting Atl. salmon in Trout Brook, N.B.)
(11): 2214 (on yellow perch fat content re winter mortality in 2 Que. lakes)
(12): 2333 (on various attributes of NE Atl. cod flesh as food)
T 500 (blue mussel growth, condition, & mortality, as cultured in 2 N.S. embayments)
509; 561; 568 (on composition of kelp)
513 (on phytoplankton successions following artificial eutrophication of 7 lake basins in NW Ont. Experimental Lakes Area)
S 2040 (laboratory simulation for summer & winter temperature adaptation of sea urchin)
2053 (distribution of bowhead & white whales in E Beaufort Sea)
2063 (on feeding & particle selection by winter flounders)
- Seawater (*see* Sea water)
- Seaweeds (*see also* Algae; Alginates; Eelgrass; *Fucus*; Kelp; Pheophyta; Rhodophyta; Wrack, bladder; *also* Cordgrass, marsh)
J 32(8): 1275 (arsenic uptake from a mine effluent discharging into sea water)
- Sebastes aleutianus* (*see* Rockfish, rougheye)
alutus (*see* Perch, Pacific ocean)
babcocki (*see* Rockfish, redbanded)
borealis (*see* Rockfish, shortraker)
brevispinis (*see* Rockfish, silvergray)
caurinus (*see* Rockfish, copper)
ciliatus (*see* Rockfish, dusky)
crameri (*see* Rockfish, darkblotched)
diploproa (*see* Rockfish, splitnose)
elongatus (*see* Rockfish, greenstriped)
emphaeus (*see* Rockfish, Puget Sound)
entomelas (*see* Rockfish, widow)
flavidus (*see* Rockfish, yellowtail)
jordani (*see* Rockfish, shortbelly)
helvomaculatus (*see* Rockfish, rosethorn)
maliger (*see* Rockfish, quillback)
marinus (*see* Redfish)
melanops (*see* Rockfish, black)
nigrocinctus (*see* Rockfish, tiger)
ovalis (*see* Rockfish, speckled)
paucispinis (*see* Bocaccio)
pinniger (*see* Rockfish, canary)
proriger (*see* Rockfish, redstripe)
reedi (*see* Rockfish, yellowmouth)
ruberrimus (*see* Rockfish, yelloweye)
saxicola (*see* Rockfish, striptail)
variegatus (*see* Rockfish, harlequin)
wilsoni (*see* Rockfish, pygmy)
zacentrus (*see* Rockfish, sharpchin)
(*see also* J 32(12): 2399 re biological data on 31 species of NE Pac.)
- Sebastes* (*see* *Sebastes*)

- Sebastolobus alascanus* (see Thornyhead, shortspine)
- Secchi disc (see Turbidity)
- Sechelt Inlet, B.C. (see Inlets)
- Sediments; Sedimentation; Mud; Silt (see also Benthos)
- J 32(4): 541 (incidence of *Vibrio parahaemolyticus* in Canadian Atl. Maritime region)
- (5): 599 (adenosine triphosphate measurements in marine)
- (8): 1275 (arsenic dispersion in, near a continuous effluent source)
- (8): 1399 (nature & probable origin of organic matter in, St. Margaret's Bay, N.S.)
- (9): 1637 (mortality of immature clams left buried under, after clam digging)
- (9): 1657 (organic feed constituents of, re structure of marine benthic communities)
- (10): 1805 (benthic fauna in, Gulf of Maine deep basins)
- T 468; 476 (benthos of, from 2 Fraser R. estuarial banks, B.C.)
- 485 (estimation of hydrocarbon concentrations in Come-by-Chance Bay, Nfld.)
- 511 (chemical nature of, in some SW Man. prairie pothole lakes)
- 545 (assessment of centrifugation & filtration for estimating low concentrations of suspended, in natural waters)
- 546; 556(1); 556(2) (chemical, physical, & mineralogical data, & transport rates, in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- 547 (re ecological studies of aquatic organisms in Mackenzie R. & Porcupine R. drainages; also effects of mud slide on Caribou Creek)
- S 2019 (role in water quality of some SW Man. prairie pothole lakes)
- 2025 (fenitrothion insecticide determination method)
- 2028 (re palaeoecology of brachipods)
- 2084 (glacial history of, & present, sediments in Gulf of St. Lawrence)
- Seine; Seining
- T 515 (purse-seine catches of young sockeye salmon & other fishes, Babine L., B.C., 1973 data record)
- Sekerak, Aaron Daniel
- S 2059 (revision of *Helicometra* & related trematode genera, with description of new species, *Neohe-licometra sebastis*)
- Selectivity of nets (see also Nets)
- J 32(11): 1943 (review of, re gillnets)
- Selenium derivatives
- J 32(2): 249 (determination on fish (trout) tissues)
- (6): 795 (in seals & other food items of the Inuit & their sledge dogs at Holman, N.W.T.)
- (6): 803 (toxicity in early life stages of zebra fish)
- (9): 1643 (in lumpfish & menhaden meals)
- Selgeby, James Harvey
- J 32(4): 461 (crustacean zooplankton life histories & abundance in L. Superior outlet)
- Senecella (see Calanoida)
- Senn, D. R.
- J 32(11): 2025 (nitrification in an aquatic recirculating system)
- Sequestering agents (see Complexation; Flotation agents)
- Sergeant, David Ernest
- J 32(7): 1047 (identity, abundance, & present status of white whale populations in N America)
- T 507 (marine mammal research in Canadian arctic)
- S 2039 (environment & reproduction in seals)
- 2053 (bowhead & white whales distribution in E Beaufort Sea)
- Sewage
- T 468; 476 (effects on intertidal benthos of mud flat & banks of Fraser R. delta, B.C.)
- S 2022 (re eutrophication)
- Sex ratio (Note: The following reference is a typical example of the many other data too numerous to be indexed separately. See also Maturity; Spawning; also names of organisms, particularly fishes and marine mammals)
- J 32(8): 1347 (Atl. mackerel in Nfld. area)
- Shad, American (*Alosa sapidissima*)
- J 32(5): 653 (meristic differences in spawning populations re evidence for homing to Saint John R. tributaries, N.B.)
- T 542 (catches & effort in B.C. commercial groundfish fishery: 1974 data record)
- Shade (see Cover; Light, reaction of organisms to)
- Shanny, Arctic (*Stichaeus punctatus*)
- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Shanny, daubed (*Lumpenus maculatus*)
- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Shanny, radiated (*Ulvaria subbifurcata*)
- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Shark, white (*Carcharodon carcharias*)
- S 2038 (pentachlorophenol in liver, N.B.)
- Shaw, Derek Humphrey
- J 32(11): 2039, 2047 (preservation of inshore male capelin stored in ice or in refrigerated sea water)

- Shaw, H. M.
J 32(10): 1813 (effect of dietary sodium chloride on Atl. salmon growth)
(10): 1821 (failure of environmental salinity to influence Atl. salmon growth)
- Shelbourn, John Edward
J 32(11): 2103 (young sockeye salmon growth rate re fish size & ration level)
- Sheldon, Raymond Wilfred
S 2028 (climatic control of brachiopods in lower Namurian shales, England)
- Shelf fisheries (see Continental shelf)
- Shellfish (see also Crab; Crabs; Lobster; Shrimp; Shrimps; also types of molluscs listed in heading Mollusca)
J 32(4): 541 (low incidence of *Vibrio parahaemolyticus* pathogen found in Canadian Atl. coast samples of various)
(6): 813 (simplified spectrophotometric curcumin method for boron determination in)
(8): 1305 (spatial model for an exploited population, e.g. scallop)
MSP 26 (illustrated folder on seashore life of Gulf Is., B.C.)
- Shieh, Hang Shan
S 2030 (melanin biosynthesis by *Aeromonas salmonicida* fish pathogen)
- Shiner, golden (*Notemigonus crysoleucas*)
J 32(10): 1799 (production in a new S Carolina reservoir)
- Shiner, redeye (*Richardsonius balteatus*)
T 515 (purse-seine catches, Babine L., B.C., 1973 data record)
- Shiner, rosyface (*Notropis rubellus*)
J 32(4): 485 (temperatures selected & avoided at various acclimation temperatures)
- Shiner, spotfin (*Notropis spilopterus*)
J 32(4): 485 (temperatures selected & avoided at various acclimation temperatures)
- Shleser, Robert A.
J 32(11): 2091 (genetic variation & structure of American lobster populations)
- Shoop, Clifford Thomas
T 541 (preliminary rearing of Pac. salmon in sea pens)
- Shortreed, K. R. S.
J 32(12): 2413 (phytoplankton succession and primary production, Babine L., B.C.)
T 558 (attached algal growth in coastal rain forest Carnation Creek, Vancouver Is., B.C.)
- Shotts, Emmett B., Jr.
J 32(8): 1243 (diagnostic procedures for pathogenic bacteria of fish diseases)
(11): 2025 (nitrification in an aquatic recirculating system)
- Shrimp, brine (*Artemia salina*)
J 32(2): 243 (an amphipod as alternative to, for salmonid feeding)
(2): 314 (automatic feeder for aquatic bioassays)
(8): 1339 (feed vs. water re uptake & accumulation of ⁶⁵Zn)
- Shrimp, ghost (*Callinassa californiensis*)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Shrimp, mud (*Upogebia pugettensis*)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Shrimp, northern pink (*Pandalus borealis*)
A 322 (general biology & fishery, Canadian Atl. coast)
- Shrimp, striped pink (*Pandalus montagui*)
A 322 (small fishery, Canadian Atl. coast)
- Shrimps, unspecified
S 2029 (arsenic in tail of Canadian Atl. coast)
- Sibert, John
J 32(1): 72 (primary productivity inhibition from phytoplanktonic vs. heterotrophic organisms competition for nitrate in stratified estuarial waters of Alberni Inlet, B.C.)
T 537 (residence of young salmonids in Nanaimo R. estuary, B.C.)
- Silicon derivatives (Note: Many routine analyses data for silicon (usually as silicate) are not indexed but may be surmised from references given under headings such as Inlets; Lakes; Limnology; Nutrients, aquatic; Oceanography)
T 498 (analysis method for, in feathers)
511 (as nutrient in some SW Man. prairie pothole lakes)
547; 566(1); 566(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
568 (content of B.C. kelp during growing season, as silicate)
- Silt (see Sediments)
- Silver derivatives
A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Silverside, Atlantic (*Menidia menidia*)
J 32(6): 729 (attractiveness of natural baits & some chemicals to, in its natural habitat)

- Silverside, brook (*Labidesthes sicculus*)
J 32(12): 2541 (first occurrence in L. Superior watershed)
- Simmonds, Richard Carroll
J 32(1): 69 (Furanace antimicrobial effects on mummichog embryos)
- Simpson, Kent Steven
J 32(2): 233 (ultrasonic tracking of sockeye salmon in Skeena R. estuary, B.C.)
- Simuliidae
T 547; 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
- Sinclair, William F.
J 32(12): 2520 (severity of the problem of statistical bias in on-site surveys, & its potential for solution)
- Sipos, John Charles
S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues of dolphins, porpoises, & toothed whales)
- Size; Size composition; Size distribution (*see also* Growth; Length; Morphology; Weight)
J 32(7): various sections (smaller cetaceans)
(8): 1419 (selective predation by young chum salmon on epibenthos, Puget Sound, Wash.)
(10): 1852 (re mathematical model for appraising uptake & retention of contaminants by fish)
(11): 2103 (of young sockeye salmon re growth rate at ration levels)
(11): 2133 (influence of size re social rank on young bluegill thermoselection behavior)
J (12): 2547 (cross section of fish: determination by acoustics)
T 496; 503 (Pac. herring caught in B.C. surveys, SW offshore Vancouver Is., 1972-73; Strait of Juan de Fuca, 1971)
S 2052 (of scale nucleus re egg, in starved vs. normally fed young kokanee & Pac. salmon)
2063 (size of winter flounder re size selection of benthic invertebrate prey)
2066 (culture of pan-size sockeye & pink salmon)
- Skagit River valley, B.C.
J 32(1): 196 (ecological impact of proposed raising of height of a dam in USA)
- Skate (unspecified)
S 2029 (arsenic in muscle of Canadian Atl.)
- Skate, big (*Raja binoculata*)
T 575 (yield & composition of deboned flesh from headed & gutted)
- Skate, thorny (*Raja radiata*)
T 526 22 (incidental to groundfish fishery in ICNAF areas)
- Skate, winter (*Raja ocellata*)
S 2046 (liver in vitro hydroxylation of biphenyl component of PCB)
- Skeena River system, B.C.
J 32(2): 233 (ultrasonic tracking of sockeye salmon entering estuary)
(8): 1369 (revised interpretation of history of sockeye salmon catches)
(10): 1777 (optimal harvest strategies for sockeye salmon)
(11): 2179 (methodology for a case study of salmon fisheries)
- Skin; Integument
J 32(1): 11 (thiourea effects on, in sexually maturing vs. gonadectomized male sockeye salmon)
(9): 1643 (glue from lumpfish)
(10): 1723 (tumors in a population of young English sole, Puget Sound, Wash.)
CHN 52; 53 (rancidity development in, re storage life of frozen Atl. mackerel)
- Slinger, Stanley James
J 32(1): 61 (biosynthetic pathways of glycerol phosphate incorporation into rainbow trout hepatic lipids)
(9): 1633 (lecithin biosynthesis pathway in rainbow trout liver microsomes)
- Smell (*see* Olfactory perception; Quality of fishery products)
- Smelt, American (*see* Smelt, rainbow)
- Smelt, rainbow (*Osmerus mordax*) (American smelt)
T 521 (immature stages in Gulf of St. Lawrence plankton collections, 1969)
- Smith, Annette L.
J 32(8): 1297 (Hg uptake by freshwater clams)
- Smith, Charlie Edward
J 32(4): 563 (histopathological changes in channel catfish infected with channel catfish virus disease)
- Smith, Donald
T 569 (quality & quantity of herring roe produced under B.C. industrial processing conditions)
- Smith, G. R.
J 32(10): 1745 (historical changes in mercury contamination in Michigan walleyes)
- Smith, Howard Donald
J 32(8): 1369 (revised interpretation of Skeena R., B.C., sockeye salmon catches)
- Smith, Janice Elaine
T 542 (catch & effort statistics on B.C. groundfish fishery, 1974 data record)

- Smith, Kenneth Lawrence, Jr.
J 32(9): 1607 (respiration & chemical composition of red crab re energetics)
- Smith, Lynwood Stephen
MSP 27 (practical guide to anatomy & physiology of Pac. salmon, specifically chinook, coho, & sockeye)
- Smith, Michael Stuart
T 497 (Pac. ocean perch biomass, underutilized groundfish species sampling, & bottom water temperature monitoring, Queen Charlotte Sound & Hecate Strait, B.C., Sept. 1974)
- Smith, N. W.
J 32(11): 2065 (proliferative bone lesions in lake whitefish)
- Smith, Thomas Georges
J 32(6): 795 (Hg in principal animal food items of Inuit from Holman, N.W.T.)
(7): 1041 (narwhal in E Canadian waters)
(12): 2559 (functional hematology of Canadian arctic ringed seal)
T 507 (marine mammal research in Canadian arctic)
S 2013 (occurrence of a horned puffin near Coppermine, N.W.T.)
2048 (organochlorine residue levels variation with age & sex of arctic ringed seals)
2083 (rough-legged hawks as arctic carrion feeders)
- Smoking; Smoked products
T 514 (survey & characterization of Canadian & imported commercially canned herring)
536 (quality of canned lightly smoked fillets from Pac. herring stored at sea)
- Smolt (*see also* name of adult fish, e.g. Salmon)
J 32(9): 1663 (terminology of intervals & stages of fish development)
- Snail, moon (*Polinices lewisii*)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Snow
T 560 (cover effect on light penetration for primary productivity in lakes, also apparatus for determining)
- Snow, Norman Brian
T 547 (ecology of aquatic organisms re sedimentation in Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
548; 549 (effects of experimental spills of crude oil on 3 Mackenzie R. delta lakes)
550 (effects of Norman Wells (N.W.T.) crude oil experimental spill into a N Yukon stream on zoobenthos of latter a year later)
551 (effects of crude oil on colonization of artificial substrates by zoobenthos organisms)
- 552 (effects of Norman Wells crude oil on periphyton in selected N.W.T. lakes & rivers)
553 (crude oil & nutrient enrichment studies in a Mackenzie R. delta lake)
557 (species list of aquatic plants & animals collected from waters of Mackenzie R. & Porcupine R. systems, 1971-73)
S 2074 (effect & fate of experimental crude oil spill into 2 Mackenzie R. delta lakes)
- Snyder, Darrel Eugene
J 32(8): 1259 (freshwater fish eggs & young origin & survival re pumping between 2 Pennsylvania, USA, reservoirs (species not indexed separately herein))
- Sochasky, Jeffrey Brian
S 2036 (the Y organ-molting gland problem in decapod Crustacea)
- Sodium derivatives (*see also* Lakes, saline; Salinity; Salt (common))
J 32(9): 1643 (in lumpfish & menhaden meals)
(10): 1813 (effect of dietary NaCl on Atl. salmon growth)
T 498 (analysis for, in feathers)
509 (variation in B.C. kelp over growing season)
511 (ionic concentrations in SW Man. prairie pot-hole lakes)
547; 556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
S 2086 (in phytoplankton & 2 zooplankton species, St. Margaret's Bay, N.S.)
- Soils
J 32(5): 599 (adenosine triphosphate measurements in)
- Sole, butter (*Isopsetta isolepis*)
T 542 (catches & effort in B.C. commercial groundfish fishery: 1974 data record)
- Sole, Dover (*Microstomus pacificus*)
T 497 (catches during groundfish survey, Queen Charlotte Sound area, B.C., Sept. 1974)
542 (catches & effort in B.C. commercial groundfish fishery: 1974 data record)
575 (yield & composition of deboned flesh from headed & gutted)
- Sole, English (*Parophrys vetulus*)
J 32(10): 1723 (epizootiology of tumors in a population of young, Puget Sound, Wash.)
T 497 & 542 (as for Sole, Dover, above)
- Sole, flathead (*Hippoglossoides elassowon*)
T 497 & 542 (as for Sole, Dover, above)
- Sole, gray (*see* Flounder, winter; Flounder, witch)
- Sole, lemon (*see* Sole, English)
- Sole, petrale (*Eopsetta jordani*)

- J 32(11): 2169 (movements, spawning, & age of tagged, off Washington & Vancouver Is.)
T 497 & 542 (as for Sole, Dover, above)
- Sole, rex (*Glyptocephalus zachirus*)
T 497 & 542 (as for Sole, Dover, above)
575 (yield & composition of deboned flesh from headed & gutted)
- Sole, rock (*Lepidopsetta bilineata*)
T 497 & 542 (as for Sole, Dover, above)
- Sole, sand (*Psettichthys melanostictus*)
T 542 (as for Sole, Dover, above)
- Sole, slender (*Lyopsetta exilis*)
T 497 (as for Sole, Dover, above)
- Sole, unspecified
S 2029 (arsenic in muscle of Canadian Atl.)
- Solids, suspended (see Matter, particulate; Sediments)
- Soloman, John
S 2015 (determining chlorine in organic materials by combustion & microcoulometry)
- Sorter; Sorting
T 484 (instrumental, vs. visual, for comparing color of raw Pac. salmon flesh vs. color after canning)
545; 546; 556(1); 556(2) (re sediments in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- Sotalia fluviatilis* (see Tucuxi)
- Sound, reactions to
T 563 (Atl. herring, re noise of underwater oil drilling operations)
S 2032 (Atl. cod, re trawling noise)
- Sound production (by marine mammals) (see Acoustics; Sounding, echo)
- Sounding, echo (see also Acoustics; Biotelemetry; Tracking; Ultrasonics)
J 32(4): 499 (hydrophonic, for humpback whale population estimates in W Indies)
(7): 1019 (echolocation by northern bottlenose whale, re skull anatomy)
(8): 1409 (for counting distribution of nearshore fish community near a thermal plume)
T 467 (mathematics of interpreting echo integrator results for density of fish populations)
S 2064 (analysis of fish count data from a digital echo-counting system)
2070; 2080 (acoustical lipid tissues re echolocation by dolphins, porpoises, & whales)
A 326 (a computerized echo-counting system for demersal fish)
- Sousa chinensis* (see Dolphin, Indo-Pacific hump-backed)
teuszii (see Dolphin, Atlantic hump-backed)
- South Africa
J 32(7): 1005 (new pygmy right whale records; distribution, migration, appearance, & behavior)
- South America (see Chile; Uruguay)
- South Carolina, USA
J 32(10): 1799 (fish production in a new impoundment)
- Soybean meal
J 32(3): 422 (amino acid supplementation of, in rainbow trout fingerling diets)
- Spartina alterniflora* (see Cordgrass, marsh)
- Spawning (see also Eggs; Fecundity; Maturity; Migration; Reproduction)
J 32(1): 66 (& maturation of S Gulf of St. Lawrence herring)
(2): 283 (of lake & round whitefish in Aishihik R. & L., Yukon)
(5): 633 (behavior of chum salmon & rainbow trout in laboratory flumes)
(5): 653 (meristic differences in populations, & homing of American shad)
(6): 821 (proposed classification of fishes by reproductive guilds, exemplified by descriptions & illustrations of form & function in early development on preferred spawning grounds, & brood habits for various Canadian & European species (not separately indexed in this index (corrections on J 32(8): 1505))
(10): 1687 (seasonal shifts in nature of sites, by black prickleback)
(11): 2169 (petrale sole off Washington & SW Vancouver Is.)
(12): 2538 (edema in Pac. salmon, & its probable role in post-spawning death)
CNG 100 (Pac. herring in B.C. waters)
T 527; 528; 529; 530 (effects of hydroelectric developments on: lake whitefish; northern pike; yellow walleye; lake trout (literature reviews & bibliographies))
- Speciation (see also Classification; Species, new; Systematics; Taxonomy)
J 32(1): 21 (of a freshwater *Cottus* sculpin population, L. Washington, Wash.)
(6): 821 (proposal to group fishes by reproductive guilds rather than by morphological categories (corrections on J 32(8): 1505))
(12): 2453 (possibilities of application of pleomerism, for fish)
- Species, endangered (see Dolphin; Dolphins; Porpoise; Porpoises; Whale; Whales)
- Species, new
J 32(2): 259 (*Heterotanytarsus perennis* & *H. nudalus* chironomids)

- (3): 367 (*Protanypus ramosus* & *P. hamiltoni* chironomids)
- (5): 649 (*Eimeria squali* coccidia from Pac. spiny dogfish, & *E. myoxocephali* from great sculpin)
- B 193 (*Heterotrissocladius oliveri*, *H. latilaminus*, *H. hirtapex*, *H. cooki*, & *H. changi* chironomids)
- S 2059 (*Neohelicometa sebastis* trematode, from Pac. *Sebastes* rockfishes)
- Species, new records or range extensions of
- J 32(8): 1442 (amphipods: first report of *Lanceola loveni* from NE Pac., & of *Scina crassicornis bermudensis* from N Pac.)
- (9): 1640 (*Ceratomyxa shasta* myxosporidian: extension N into B.C.)
- (12): 2541 (first record of brook silverside in L. Superior watershed)
- S 2013 (horned puffin: eastern record to near Copermine, N.W.T.)
- Spectral analysis (see Mathematical treatment of data)
- Spectroscopy (see Analysis methods (chemical))
- Speed, swimming (see Swimming)
- Spencer, Keith David
- J 32(4): 507 (fatty components & moisture of Canadian capelin, 1972-73)
- Spermatozoa
- S 2018 (malic enzymes in man, bull, Atl. salmon & cod)
- Sphaerium* (see Clams, freshwater)
- Spines (see Fins)
- Spisula solidissima* (see Clam, bar)
- Spleen
- J 32(4): 563 (histopathology of channel catfish virus diseased)
- Spoilage (see Bacteria; Enzymes; Quality of fishery products; Trimethylamine)
- Spores (see also Bacteria; Myxosporidia; Sporozoa)
- J 32(9): 1640 (identification of *Ceratomyxa shasta* myxosporidian)
- Sporozoa (see also Ceratomyxosis; Myxosporidia; Spores)
- J 32(5): 649 (new coccidia species, *Eimeria squali* from Pac. spiny dogfish, & *E. myoxocephali* from great sculpin)
- Sport fishery (see Angling; Aquaculture; Feed; also names of sport fishes)
- Sprague, John Booty
- J 32(1): 1 (temperature re toxicity of Zn to Atl. salmon)
- (6): 867 (review of book on the poisons around us; toxic metals in food, air, and water)
- Sprules, William Gary
- J 32(3): 389 (midsummer crustacean zooplankton communities in acid-stressed lakes)
- Squalus acanthias* (see Dogfish, spiny)
- Squawfish, northern (*Ptychocheilus oregonensis*)
- T 515 (purse-seine catches, Babine L., B.C., 1973 data record)
- Squid, longfinned (Atlantic) (*Loligo peali*)
- T 526 36 (as potentially greater resource in ICNAF areas)
- Squid, longfinned (Pacific) (*Loligo opalescens*)
- T 542 (catches in B.C. commercial groundfish fishery: 1974 data record)
- Squid, short-finned (*Illex illecebrosus*)
- J 32(7): 1145 (Nfld. fishery & landings re availability of long-finned pilot whale)
- T 526: 36 (as potentially greater resource in ICNAF areas)
- St. John River, N.B. (see Saint John River, N.B.)
- St. Lawrence, Gulf of
- J 32(1): 66 (maturation & spawning of Atl. herring in S)
- (2): 310 (DDT residues in euphausiids in upper estuary)
- (4): 471 (delineating spring & autumn Atl. herring populations in S)
- (4): 479 (incidence of American plaice trematode parasites re fish length & feed)
- (9): 1613 (role of stock biomass & temperature in recruitment of cod in S)
- T 490; 521 (eggs, larvae, & young fishes in plankton collections, also some hydrographic data, 1968; 1969)
- S 2084 (surficial geology; physiography; submarine topography; sedimentary history; effects of glaciation; etc.)
- St. Lawrence River
- J 32(2): 310 (DDT residues in euphausiids in upper estuary)
- (10): 1867(F) (age & growth of channel catfish near Quebec, Que.)
- (11): 2125 (biodegradation of phenolic compounds in, downstream from a petroleum oil refinery)
- (12): 2373 (penetration of estuarial surface waters into deep-water layer of Saguenay fjord, Que.)
- St. Margaret's Bay, N.S.
- J 32(8): 1399 (nature & probable origin of organic sedimentation)
- T 500 (growth, etc. of cage-cultured blue mussel)

- S 2086 (biochemical & mineral composition of *Calanus finmarchicus*, *Sagitta elegans*, & phytoplankton)
- St. Vincent (see West Indies)
- Stainton, Michael Paul
S 2021 (cation exchange & electrical conductance automated determination of chloride & sulfate in fresh water)
- Stamina (see also Stress; Swimming)
J 32(4): 559 (dummy telemetry transmitters effect on Atl. salmon smolts)
- Starfishes (sea stars) (see also Brittle stars)
MSP 26 (drawing of purple sea star (*Pisaster ochraceus*), typical of Gulf Is. marine parks, B.C.)
S 2046 (pyloric caeca of *Asterias vulgaris* in vitro hydroxylation of biphenyl component of PCB)
- Starvation
J 32(12): 2479 (effect on nitrogen excretion & oxygen consumption daily pattern of young sockeye salmon)
(12): 2528 (effect of pulpmill effluent on survival of starved young coho salmon)
T 501 (effects of decreasing winter rations on growth & survival of cultured young coho salmon)
S 2052 (effects on scale circulus formation, scale nucleus size re egg size, fish length & weight, in young kokanee & Pac. salmon)
- Stasko, Aivars
J 32(12): 2515 (modified lobster traps for catching crabs but not lobsters)
T 499 (automatic monitor for detecting & recording passage of transmitter-fitted fish)
534 (annotated bibliography on underwater biotelemetry)
S 2034 (hydrophone system for determining swimming depth of fish fitted with ultrasonic transmitters)
- Statham, Charles Noel
J 32(4): 515 (metabolism of a salicylanilide lampricide (Bayer 73) in rainbow trout)
- Statistics (see also Mathematical treatment of data)
J 32(4): 551 (statistical estimation of normal blood chemistry ranges & variance in rainbow trout)
B 191 (computation & interpretation of biological, of fish populations (has its own index))
- Stenella attenuata* (see Dolphins, spotted)
coeruleoalba (see Dolphin, striped)
dubia (see Dolphins, spotted)
frontalis (see Dolphins, spotted)
longirostris (see Dolphin, spinner)
plagiodon (see Dolphins, spotted)
- Steno bredanensis* (see Dolphin, rough-toothed)
- Stenodus leucichthys* (see Inconnu)
- Sterliadochona* (see Nematoda)
- Steroids (see Corticosteroids; Hormones)
- Sterols
J 32(8): 1431 (cholesterol requirement of young American lobster)
- Sterones (see Hormones)
- Stevenson, James Cameron
J 32(8): 1503 (obituary of Albert Lewis Tester)
- Stewart, James Edward
J 32(5): 702 (red & snow crab resistance to gaffkemia infection)
B 188(F): 35 (practice & potential of invertebrate & seaweed aquaculture in Canada (French edition of 1974 English edition))
S 2014 (effect of 4 dispersants on biodegradation & growth of bacteria on crude petroleum oil)
- Stichaeus punctatus* (see Shanny, Arctic)
- Stickleback, blackspotted (*Gasterosteus wheatlandi*)
T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Stickleback, threespine (*Gasterosteus aculeatus*)
T 483 (population movements in Lymn Creek, Vancouver Is., B.C., 1971-72)
490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Stickleback species
J 32(12): 2542 (seaward movement in Lymn Creek, Vancouver Is., B.C.)
- Stimuli (reactions of organisms to) (see Adaptation; Attractants; Baits; Behaviour; Chemoreception; Currents, reaction of organisms to; Diel habits; Feed; Flow; Galvanonarcosis; Homing; Learning response; Light, reaction of organisms to; Olfactory perception; Oxygen, dissolved; Pollution; Pressure, hydrostatic; Salinity; Season effects; Sound, reactions to; Stress, Temperature, biological effects; Toxicants; also of organisms)
- Stizostedion vitreum* (see Walleye)
- Stock, J. H.
J 32(2): 326 (review of book on shallow-water gammaridean Amphipoda of New England)
- Stockner, John Gary
J 32(12): 2413 (phytoplankton succession & primary production, Babine L., B.C.)
T 516 (marine phytoplankton of 2 SE B.C. coastal sounds)

- 558 (attached algal growth on coastal rain forest
Carnation Creek, Vancouver Is., B.C.)
- Stocks (*see also* Abundance; Biomass; Exploitation; Fisheries; Management; Mortality; Populations; Recruitment; Spawning; Survival; *also* names of aquatic animals)
- J 32(2): 307 (re significance of Atl. salmon taken in the sea in N Labrador)
- (3): 404 (fecundity comparisons of various lake whitefish, in lakes near Yellowknife, N.W.T.)
- (7): 891-945 (number, distribution, & status of, for many species of smaller cetaceans)
- (8): 1369 (re history of Skeena R., B.C., sockeye salmon catches)
- (8): 1383 (re changes in abundance & biology of American plaice, Grand Bank, off Nfld.)
- (8): 1465 (distribution, movements, dynamics, & management, as investigated by FRBC (summary))
- (9): 1613 (biomass & temperature role in recruitment of S Gulf of St. Lawrence cod)
- (10): 1777 (re optimal harvest strategies for Skeena R. sockeye salmon)
- CNG 100 (assessment of B.C. herring)
- T 526 (current status of Atl. offshore groundfish under ICNAF jurisdiction)
- Stomach (*see* Digestion; Metabolism; *also* note to next heading)
- Stomach contents (*Note:* Details of feed observed in stomach contents are not indexed separately; general references will be found under Digestion; Feed; Metabolism; Predation; *also* under names of predators or prey)
- Stoneflies (*see* Plecoptera)
- Stoneroller (*Campostoma anomalum*)
- J 32(4): 485 (temperatures selected & avoided at various acclimation temperatures)
- Storage (of fishery products) (*see also* Chilling; Quality of fishery products; Rancidity; Refrigeration; Sea water, refrigerated; Superchilling)
- J 32(8): 1465 (as investigated by FRBC (summary))
- Strait of (*see* name of strait)
- Strandings
- J 32(7): 1019 (of northern bottlenose whales in Bay of Fundy, N.S.: biological parameters, anatomy, ages)
- (7): 1095 (stranding mortality re population abundance of smaller cetaceans in NE Atl.)
- (7): 1101 (long-finned pilot whales, Ireland, 1800-1973)
- Strasdine, George Alfred
- J 32(4): 554 (acute toxicity of kanamycin to steelhead trout)
- Strategy (for fisheries) (*see also* Fisheries; Management)
- J 32(10): 1777 (optimal, for Skeena R., B.C., sockeye salmon)
- (12): 2569 (re international joint ventures in fishing & 200-mile economic zones)
- Streams
- T 504; 566 (bibliographies of references to Canadian biology)
- 562 (research problems in ecology of B.C.)
- Stred, Kristin Ann
- J 32(4): 559 (effect of dummy telemetry transmitters on Atl. salmon smolt stamina)
- Stress (*see also* Pollution; Swimming; Temperature; Toxicants)
- J 32(11): 2221 (opercular rates of salmon as index of)
- (12): 2357 (blood cell counts of salmon as index of)
- Strongylocentrotus* (*see* Sea urchins)
- Strontium derivatives
- J 32(9): 1643 (in lumpfish & menhaden meals)
- T 509 (variation of amount in B.C. kelp during growing season)
- S 2086 (in phytoplankton & 2 zooplankton species, St. Margaret's Bay, N.S.)
- Stross, Raymond George
- J 32(2): 219 (filtering & feeding rates control in arctic *Daphnia*)
- Stuckey, Hersel Monte
- J 32(11): 2224 (antibody identification & detection of bacterium causing kidney disease of salmonids)
- Sturgeon, green (*Acipenser medirostris*)
- T 542 (catch & effort in B.C. commercial groundfish fishery: 1974 data record)
- Sturgeon Bank, B.C. (off Fraser River mouth)
- T 468 (zonation of intertidal biomass & related benthic data)
- Subba Rao, Durvasula Venkata
- T 524 (phytoplankton production, nutrients, & density in N.S. sea-shelf areas)
- Submersibles (*see* Photography)
- Succession
- J 32(12): 2413 (phytoplankton, re primary production, Babine L., B.C.)
- T 511; 512 (phytoplankton, in SW Man. prairie pothole lakes & ponds)
- 513 (phytoplankton seasonal, following artificial eutrophication of 7 lakes)
- Sucker, largescale (*Catostomus macrocheilus*)
- T 515 (purse-seine catches, Babine L., B.C., 1973 data record)

- Sucker, longnose (*Catostomus catostomus*)
J 32(11): 1989 (distribution, Great Bear L., N.W.T.)
- Sucker, spotted (*Minytrema melanops*)
J 32(10): 1799 (production in a new S Carolina impoundment)
- Sucker, white (*Catostomus commersoni*)
J 32(1): 161 (ecological changes caused by hydroelectric developments on Saint John R., N.B.)
(10): 1705 (comparative uptake of Aroclor & diel-drin insecticides)
T 515 (purse-seine catches, Babine L., B.C., 1973 data record)
574 (pilot plant application of processing improved formulated breaded product from flesh of mechanically deboned)
S 2008 (effects on, from long-term acidification of George L., Ont.)
- Sudan (see Nubia, Lake)
- Sugars (see Glucose)
- Sulfate (see Sulfur derivatives)
- Sulfur derivatives (see also Fenitrothion; Flotation agents; Thiourea)
J 32(9): 1643 (% S in lumpfish & menhaden meals)
T 511 (H_2S and SO_4 concentrations in some SW Man. prairie pothole lakes)
568 (SO_4 content of B.C. kelp during growing season)
S 2021 (automated determination of SO_4 in fresh water by cation exchange & conductance)
- Summerkill (of fish) (see also Season effects; Winterkill)
J 32(8): 1283 (possibilities of predicting, in SW Man. prairie ponds)
T 511 (in SW Man. prairie ponds & lakes)
S 2019 (in SW Man. prairie ponds & lakes)
- Sunde, Leif Axel
T 510 (geography & lake morphometry in Erickson-Elphinstone district of SW Man.)
- Sunfish, green (*Lepomis cyanellus*)
J 32(4): 485 (temperatures selected & avoided at various acclimation temperatures)
(6): 769 (pH effects on antimycin toxicity to)
- Sunfish, pumpkinseed (see Pumpkinseed)
- Sunfish, redbreast (*Lepomis auritus*)
J 32(10): 1799 (production in a new S Carolina impoundment)
- Sunfish, warmouth (see Warmouth)
- Sunfishes (see above species; also Hybridization; *Lepomis*)
- Superchilling
J 32(9): 1595 (temperature re deteriorative changes in stored postrigor Atl. cod muscle)
- Superior, Lake
J 32(4): 461 (life history & abundance of crustacean zooplankton in outlet, 1971-72)
(12): 2541 (first occurrence of brook silverside in watershed)
T 525 (chlorophyll *a* & primary production, May-Nov. 1973)
572 (benthic macroinvertebrates)
- Surveys (see also Census; Populations; also Groundfish)
J 32(12): 2520 (severity of the problem of statistical bias in on-site surveys, & its potential for solution)
T 490; 521 (fish eggs, larvae, & juveniles from Gulf of St. Lawrence plankton collections, 1968; 1969)
492 (B.C. hydrozoan medusae)
496; 503 (Pac. herring populations & movements, offshore SW Vancouver Is., 1972 & 1973; Juan de Fuca Strait, 1971)
497 (Pac. ocean perch biomass & bottom water temperatures, also catches of various fishes, Sept. 1974 survey, Queen Charlotte Sound area, B.C.)
514 (characterization of Canadian & imported canned herring products)
- Survival (see also Mortality; Pollution; Populations; Toxicants)
J 32(4): 493 (effect of temperature on rainbow trout, in acid waters)
(4): 523 (of infectious pancreatic necrosis (IPN) virus re halogen disinfectants)
(6): 809 (effects of saline waters from N Dak. lakes on fathead minnow embryos & sac fry)
(7): 1197, 1213 (of smaller cetaceans in aquaria & oceanaria)
(8): 1259 (of freshwater fish eggs & young when pumped between two reservoirs (species not indexed separately herein))
(8): 1267 (& inactivation of IPN virus)
(8): 1359 (wild brook trout stream population during removal of nontrout species)
(12): 2365 (model tests & sample size determination for estimating survival rate from tag returns of angler-caught fish)
(12): 2447 (determining natural, of northern fur seal)
(12): 2528 (effect of pulp mill effluent on starved young coho salmon)
(12): 2582 (history of Atl. & Pac. salmon fight for (book review))
B 191 (re biological statistics of fish populations (has its own index))
T 501 (effects of winter starvation & feeding on cultured young coho salmon)
S 2081 (*Eggregia laevigata* laminarian kelp)
- Susu, Ganges (*Platanista gangetica*) (a dolphin)
J 32(7): 942 (overview), 951 (distribution), 952 (net fishery), 956 (incidental catches)

- S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Susu, Indus (*Platanista indi*) (a dolphin)
J 32(7): 942 (overview), 951 (distribution), 952 (net fishery), 956 (incidental catches)
- Sutil Channel, B.C. (see Georgia, Strait of)
- Sutterlin, Arnold Martin
J 32(6): 729 (chemical attraction of some marine fish in their natural habitat)
(9): 1674 (review of book on chemoreception in marine organisms)
(12): 2441 (possible role of posterior lateral line in brook trout obstacle entrainment)
- T 531 (harvesting, processing, & composition of sea cucumber meal as possible substitution for herring meal in trout diets)
- 538 (experimental diets effects on rainbow trout growth in salt water)
- Swimbladder
J 32(2): 303 (re buoyancy adjustment of tadpole madtom & black bullhead in response to water velocity change)
(9): 1648 (infection in rainbow trout, chinook & coho salmon, by a fungal plant saprophyte)
- Swimming (see also Pressure, hydrostatic; Respiration; Swimbladder)
J 32(1): 33 (optimal speed of bleak, re growth & metabolism)
(4): 559 (effect of dummy ultrasonic & radio transmitters on Atl. salmon smolt stamina)
(6): 753 (effect of exposure to pulp mill effluent on young coho salmon carbohydrate metabolism during swimming exercise vs. rest)
(6): 785 (DDT effects on rainbow trout performance)
(12): 2441 (possible role of brook trout lateral line in positioning in water flow behind a bottom obstacle)
(12): 2453 (pleomerism of fishes re their locomotory ability)
- B 190 (hydrodynamics & energetics of fish & marine mammalian propulsion (has its own index; individual species not indexed in present index))
- T 502 (effect of drilling fluids on lake whitefish & rainbow trout)
- S 2034 (ultrasonic equipment for determining depth of fish)
- Swordfish (*Xiphias gladius*)
S 2029 (arsenic in muscle of Canadian)
- Symons, Philip Edward Kyrle
S 2035 (young Atl. salmon territorial behavior reduces predation by trout)
- Symposium (see also Conference; Perspectives)
J 32(1): 97-209 (proceedings of, on hindsight & foresight in Canada re environmental impact assessment of hydroelectric projects, Ottawa, Jan. 7-8, 1974)
- Syndrome (see Refsum's syndrome)
- Syngnathus fuscus* (see Pipefish, northern)
- Systematics (see also Classification (and topics listed in that heading))
J 32(6): 821 (proposed system for fishes, based on reproductive guilds & embryonic development (corrections on J 32(8):1505)
(7): 891-945 (of 66 species of smaller cetaceans, by species), 966-968 (notes on, re nomenclature of known species of smaller cetaceans)
(7): 1059 (differentiation of *Stenella* dolphins in tropical E Pac.)
- S 2061 (rationalization of brachypterine taeniopterygid Plecoptera)
- T**
- Tabellaria* (see Diatoms)
- Tagging (see also Marking; Migration; Tracking)
J 32(7): 960, 1237 ("streamer" tag for smaller cetaceans)
(8): 1347 (Nfld. mackerel)
(11): 2169 (for movements, growth, age, & spawning of petrale sole off Washington & Vancouver Is.)
(12): 2365 (estimating fish survival rate from return of tags by anglers)
- T 499 (ultrasonic, for recording passage of fish through channels, also computer program for reading taped results)
- S 2034 (ultrasonic, for determining swimming depth of fish)
- Takahashi, Masayuki
J 32(11): 2189 (excretion rates of marine zooplankton re phytoplankton concentrations)
- Tanks (see also Aquaculture; Aquaria; Holding, live)
T 495 (solid-state thermostat for live-fish experiments)
517 (electronic system for continual monitoring of temperature in experimental)
- Taruski, Algis George
J 32(4): 499 (visual & acoustic estimate of humpback whale population in West Indies)
(11): 2205 (chlorinated hydrocarbons in cetaceans)
- Tasmacetus shepardi* (see Whale, Sheperd's beaked)
- Taste (see Attractants; Chemoreception; Quality of fishery products)

- Tasting panels (see various references under Quality of fishery products, particularly T 574)
- Tautoglabrus adspersus* (see Cunner)
- Tautz, Arthur Fredrick
J 32(5): 633 (chum salmon & rainbow trout spawning behavior)
- Taxonomy (see also Classification and topics in that heading)
J 32(2): 295 (cytotaxonomy of inconnu (*Stenodus*) re that of lake whitefish (*Coregonus*))
(6): 821 (a proposal for classification of fishes by reproductive guilds rather than on morphological characteristics, exemplified by descriptions & illustrations of Canadian & European species (not indexed separately in this index; (corrections on J 32(8): 1505))
(12): 2453 (possibilities of applying pleomerism, for fish)
B 193 (Nearctic & Palearctic *Heterotrissocladius* Chironomidae)
S 2059 (revision of *Helicometra* & related genera of Trematoda)
- Taylor, Frederick Henry Carlisle
T 496 (1972 & 1973 SW Vancouver Is. offshore herring surveys)
503 (July-Dec. 1971 Juan de Fuca Strait herring surveys)
- Teeth
J 32(7): 1019 (growth layers in, of northern bottlenose whales)
(7): 1041 (re age determination of narwhals)
(7): 1073 (re age of Franciscana dolphin)
- Temperature, biological effects of and reactions to (see also Season effects; following heading)
J 32(1): 1 (re acute toxicity of Zn ion to Atl. salmon)
(2): 219 (re *Daphnia* filtering rate)
(3): 397 (re embryonic development, early growth, & meristic variation in rainbow trout)
(4): 485 (selected & avoided by fish at various acclimation temperatures (addendum on J 32(8): 1505))
(4): 493 (re rainbow trout development in acid waters)
(5): 667 (re winter ecology of young coho salmon & steelhead trout in a stream)
(5): 713 (re lobster aggressive behavior)
(8): 1383 (re size at age of American plaice of Grand Bank, off Nfld.)
(8): 1409 (re distribution of nearshore fish community near thermal plume from a L. Ont. nuclear generating station)
(9): 1545 (re ceratomyxosis in rainbow trout & coho salmon)
(9): 1553 (re *Flexibacter columnaris* infection in steelhead trout, coho & chinook salmon)
(9): 1613 (re recruitment of S Gulf of St. Lawrence cod)
(9): 1633 (acclimation of rainbow trout, re lecithin biosynthesis pathway)
(10): 1843 (re hyperecdysonism in ecdysterone-injected American lobsters)
(10): 1870 (effects of brief increases, on growth & mortality of larval coot clams)
(11): 2133 (influence of size & social rank on bluegill thermoselection behavior)
(12): 2552 (effect of 3 temperatures on Zn uptake by Atl. salmon)
(12): 2564 (variation effect on 2 arctic amphipods)
T 495 (solid-state temperature controller for testing of)
517 (electronic system for continual monitoring of temperature in experimental tanks)
573 (re acute toxicity of CuSO_4 to rainbow trout)
S 2007 (on embryonic development, larval growth, & vertebral number, of garfish)
2040 (laboratory adaptation of sea urchin to summer & winter simulation)
- Temperature of natural waters (see also Limnology; Oceanography, also previous heading) (Note: Routine temperature observations are not indexed separately)
J 32(2): 253 (comparison of Canadian & Japanese merchant-ship observations of sea-surface temperature in vicinity of NE Pac. Ocean Weather Station "P," 1927-33)
(8): 1383 (changes over 22 years at Grand Bank, off Nfld., re changes in abundance & size at age of American plaice)
(9): 1561 (annual & longer-term variations of S B.C. coastal deep water)
(10): 1693 (seasonal variations in an Alaskan inlet with tidewater glaciers)
(11): 1971 (coldness of Great Bear L., N.W.T., re its geography)
T 497 (bottom, Queen Charlotte Sound area, B.C., Sept. 1974 (data record))
- Terminology (see also Classification; Glossaries)
J 32(9): 1663 (of intervals & stages in fish development)
S 2043 (female genitalia of chironomids)
- Territorial behavior
S 2035 (of young Atl. salmon reduces predation by brook trout)
- Tessier, A.
J 32(11): 2125 (degradation of phenolic compounds downstream from a petroleum oil refinery)
- Tester, Albert Lewis
J 32(8): 1503 (obituary of)
- Testes (see also Gonads; Hormones; Maturity; Reproduction; Spermatozoa)
S 2057 (CdCl₂ effect on, in living brook trout)

- Testosterone and derivatives (see Hormones)
- Tetraselmis* (see Chlorophyta)
- Textile industry effluents
T 489 (literature review of effects of Canadian, on aquatic organisms)
- Texture (see Quality of fishery products)
- Thais* (see Whelk)
- Thakore, Arvind Natverlal
J 32(8): 1249 (isolation & identification of pulp mill bleach effluent constituents toxic to rainbow trout)
(12): 2556 (toxicity of insect hormones to young rainbow trout)
- Thaleichthys pacificus* (see Eulachon)
- Thallium derivatives
T 518 (chemistry, applications, toxicity, & pollution potential (review))
S 2049 (occurrence in some N.B. streams & toxicity to young Atl. salmon)
A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Theragra chalcogramma* (see Pollock, Pacific)
- Thermoselection (see Temperature, biological effects)
- Thermostat
T 495 (a solid-state temperature controller with heating & cooling control for fish-holding tanks in biological experiments)
517 (electronic system for continual monitoring of water temperature in experimental tanks)
- Therriault, Jean Claude
J 32(12): 2373 (St. Lawrence R. estuarial surface waters penetration into deep-water layer of Saguenay R. fjord, Que.)
- Thiaminase (see Enzymes)
- Thiobarbituric acid test for rancidity
CHN 51 (improved, for foods)
- Thiourea
J 32(1): 11 (effects on sexually maturing vs. gonadectomized male Atl. salmon)
- Thomas, Robert E.
J 32(11): 2221 (effects of water-soluble fraction of crude petroleum oil on pink salmon fry opercular rates)
- Thompson, Barbara Mary
T 489 (literature review of effects of Canadian textile industry effluents on aquatic organisms)
- Thompson, John Anthony Jeffrey
T 506 (chemical delineation of submerged mine tailings plume in 2 B.C. inlets)
- Thomson, J. Arthur
T 493 (characteristics of some modified second-order orthogonal composite factorial designs)
522; 540 (seawater transport computations for N Pac. Ocean, 1973; 1974)
- Thorium derivatives
A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Thornyhead, shortspine (*Sebastolobus alascanus*)
T 497 (catches during a B.C. groundfish survey, 1974)
542 (catch & effort statistics in B.C. commercial fishery, 1974)
565 (age re length, geographically in NE Pac. Ocean)
575 (yield & composition of deboned flesh from headed & gutted)
- Threonine (see Acids, amino; Enzymes)
- Thurston, Robert Vance
J 32(12): 2379 (pH & temperature effect on aqueous NH₃ equilibrium)
- Thymallus arcticus* (see Grayling, Arctic)
- Thyroid
J 32(1): 11 (effect of thiourea on, in sexually maturing vs. gonadectomized male sockeye salmon)
- Thysanöessa* (see Euphausiacea)
- Tides
J 32(2): 233 (effects on sockeye salmon homing to Skeena R. estuary, B.C.)
(3): 347 (effects on zooplankton sample variability in a nearshore environment)
S 2085 (re turbulent diffusion from a continuous source at sea)
- Tilapia (*Tilapia nilotica*)
J 32(11): 2137 (re estimates of potential fish yield from Nasser Reservoir, Africa)
- Tin derivatives
A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Tipulidae
T 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
- Titanium derivatives
T 556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
A 324 (environmental pollutive potential & toxicity re biological uptake (review))

- Tocher, Carol Ann Shipton
J 32(4): 507 (fatty components & moisture of Canadian capelin, 1972-73)
- Tocopherol (see Vitamin E)
- Todd, Ian St. Pierre
J 32(2): 233 (ultrasonic tracking of sockeye salmon in Skeena R. estuary, B.C.)
- Tolerance (see also Metal ions; Pollution; Temperature; Toxicants; Salinity; also names of chemical elements)
J 32(4): 493 (re pH & temperature, of rainbow trout embryos & young)
(12): 2295 (of minimal dissolved oxygen requirements by Canadian aquatic life (review))
(12): 2564 (of 2 arctic amphipods to temperature & salinity variations)
- Tomlinson, J. W. C.
J 32(12): 2569 (international joint ventures in fishing & 200-mile economic zones)
- Tomlinson, Neil
T 484 (instrumental color sorting of raw salmon in preparation for canning)
536 (storage of Pac. roe herring at sea)
- Tonicella* (see Chitons)
- Tooth (see Teeth)
- Townsend, Bruce Edward
T 517 (electronic systems for continual monitoring of temperature, pH, conductivity, & dissolved oxygen)
- Townsend, Gerald Hugh
J 32(1): 171 (impact of Bennett Dam (B.C.) on L. Athabaska river deltas, Alta.)
- Toxaphene
J 32(5): 593 (effects on fathead minnow growth & bone composition)
(5): 609 (effects on brook trout growth & development)
- Toxicants; Toxicity (see also the following headings (and other topics listed in some): Dosing; Drilling fluids; Effluents; Flotation agents; Lampricide; Lubricants; Metal ions; Pesticides; Pollution; Polychlorinated biphenyls; also names of chemical elements)
J 32(1): 1 (temperature re acute toxicity of Zn ion to Atl. salmon)
(3): 411 (Na pentachlorophenate & dehydroabietic acid as reference toxicants for salmonid bioassays)
(4): 544 (multichannel injection system, for flow-through bioassays)
(4): 554 (acute toxicity of kanamycin antibiotic to steelhead trout)
(6): 769 (pH effects on toxicity of antimycin to fish; also on detoxification of antimycin)
(6): 789 (detoxification of pulp mill effluents)
(6): 803 (of selenium to early life stages of zebra fish)
(6): 867 (review of book on toxic metals in food, air, & water)
(8): 1465 (as investigated by FRBC (summary))
(10): 1849 (apparatus for continuously saturating water with organic hydrophobic)
(10): 1852 (some methodology for appraising, in aquatic systems, re age, length, & weight of fish)
(10): 1864 (acute toxicity of crude oil benzene component to young striped bass)
(10): 1880 (improved flowing water apparatus for testing effects on larval crabs)
(11): 2227 (sublethal effect of 5-chlorouracil on carp larvae)
(12): 2495 (residual chlorine in power plant cooling waters to 2 copepods)
(12): 2525 (acute, of chlorine in estuarial waters to various invertebrates & fishes)
(12): 2556 (acute, of juvabione insect hormones to young rainbow trout)
(see J 32(3) reference above)
T 464 (constant-flow apparatus for introducing toxicants for bioassays)
518 (review of toxicity & pollution potential of thallium compounds)
535 (ammonia: removal from hatchery & aquaculture water reuse systems)
573 (factors affecting acute, of CuSO₄ to rainbow trout)
S 2027 (isolation & detection of miserotoxin)
A 324 (heavy metals & their derivatives, re environment & biological uptake (review))
- Tracey, Martin L.
J 32(11): 2091 (genetic variation & structure of American lobster populations)
- Tracking (of underwater animals) (see Biotelemetry; Migration; Movements; Sounding, echo; Ultrasonics)
- Tran, Van Dan
J 32(9): 1629 (solubilization of Atl. cod myofibrillar proteins by sodium pyruvate during frozen storage)
- Transennella tantilla* (see Clam, little transennella)
- Transferases (see Enzymes)
- Translation Series (Note: This is a series originated by the Fisheries Research Board of Canada. It is not indexed herein, but lists by authors and titles, by number, from No. 3123 to No. 3553, appeared in the following issues)
J 32(1): 214; (2): 329; (3): 452; (4): 577; (5): 725; (6): 870; (8): 1512; (9): 1680; (10): 1939; (11): 2289; (12): 2592

Transplantation

- J 32(3): 402 (occurrence of Pac. pink salmon in L. Huron)
(12): 2343 (evaluation of Pac. pink salmon, from B.C. to Nfld.)

Transport, mass (of waters)

- T 522; 540 (Ekman transport computations & charts, N Pac. Ocean, 1973; 1974)

Transport of chemical ions and aqueous nutrients

- T 556 (daily rate, in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)

Transport of sediments in waters (see Sediments)

Transportation of fishery products (see also Chilling; Handling; Ice; Packaging; Quality of fishery products; Refrigeration; Sea water, refrigerated; Superchilling)

- A 323 (live lobsters)

Traps

- J 32(6): 729 (re determining attractiveness of chemicals & baits to some marine fish in their natural habitat)
(6): 761 (re censusing commercial spider crab, & calibrating effective area fished by)
(12): 2515 (modified lobster, for catching crabs but excluding lobsters)

Trawls; Trawling

- J 32(12): 2535 (a small-boat otter trawl for limnological collecting)
S 2032 (noise of, re gillnet catches of Atl. cod)

Traxler, Garth Stanley

- S 2073 (HgCl₂ effect on morphology & acid phosphatase of tissue cells cultivated in suspension)

Trematoda (see also Parasites)

- J 32(4): 479 (incidence of 10 species (not separately indexed) in American plaice from Scotian Shelf & Gulf of St. Lawrence, re fish length & feed; some invertebrates as possible intermediate hosts)
(4): 547 (geographic variation in incidence in NW Atl. American plaice)
(7): 1073 (unidentified, in Franciscana dolphin)
(11): 2069 (*Discocotyle sagittata* & *Crepidostomum farionis* most common, in Atl. salmon of Trout Brook, N.B.)
S 2059 (a revision of *Helicometra* & related genera, including a new species, *Neohelicometra sebastis*)

Trichoptera (caddisflies)

- J 32(8): 1455 (toxicity of a larval lampricide to several species)
T 547; 557 (collected in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)

Triglops murrayi (see Sculpin, mailed)

Triglycerides (see also Acids, fatty; Lipids; Oils, fatty, & fats)

- J 32(4): 507 (of some oils & lipid extracts of Nfld. & Labrador capelin, 1972-73)
S 2070; 2080 (amounts & fatty acids of, in jaw, melon, & blubber lipids of various whales, dolphins, & porpoises)

Trimethylamine (see also Quality of fishery products)

- J 32(11): 2039 (onset in capelin stored in ice)

Trout, brook (*Salvelinus fontinalis*)

- J 32(1): 92 (infectious pancreatic necrosis (IPN) virus & bacterial kidney disease appearing concurrently in hatchery)
(4): 485 (temperatures selected & avoided at various acclimation temperatures)
(4): 568 (frequency of detection & survival of IPN virus in a carrier population in an Alta. lake)
(5): 609 (toxaphene insecticide effects on growth & development)
(8): 1359 (movement, growth, & survival in stream population of wild, during removal of nontrout species)
(8): 1437 (possible viral interference in isolation of IPN virus from carrier trout)
(9): 1652 (selection of shade re water depth)
(12): 2441 (possible role of posterior lateral line to position in flow around obstacles)
(12): 2513 (fatty acid levels in developing eggs & fry)
CHN 55 (fish oil as source of pigment in diet for enhancing pink flesh color)
S 2029 (arsenic in muscle)
2035 (predation on young Atl. salmon reduced by territorial behavior of latter)
2046 (liver in vitro hydroxylation of biphenyl component of PCB)
2057 (sublethal effects of CdCl₂ on maturation & testosterone & ketotestosterone production in trout)

Trout, brown (*Salmo trutta*)

- J 32(12): 2385 (biosynthesis of organic arsenic compounds from oral or injected administration of inorganic arsenic)

Trout, cutthroat (*Salmo clarki* (*clarki*))

- J 32(5): 681 (preferences of young re simulated alteration of winter habitat)
T 483 (population movements in Lymn Creek, Vancouver Is., B.C., 1971-72)
567 (notes on ecology of, in Great Central L., Vancouver Is.: feed, length, growth, etc.)

Trout, Kamloops (see Trout, rainbow)

Trout, lake (*Salvelinus namaycush*)

- J 32(5): 623 (system stimulation of predatory activities of sea lamprey on)

- (10): 1852 (as example for mathematical model application of appraising uptake & retention of contaminants by fish age, length, & weight)
- (11): 1989 (distribution, Great Bear L., N.W.T.)
- T 515 (purse-seine catches, Babine L., B.C., 1973 data record)
- 530 (effects of hydroelectric development on biology: reproduction, development, & population dynamics (literature review & bibliography))
- Trout, rainbow (*Salmo gairdneri*) (Kamloops trout; see also Trout, steelhead)
- J 32(1): 61 (biosynthetic pathways of glycerol phosphate incorporation into liver lipids)
- (1): 92 (infectious pancreatic necrosis virus & bacterial kidney disease appearing concurrently in hatchery)
- (2): 300 (galvanonarcosis for immobilization of)
- (3): 397 (embryonic development, early growth, & meristic variations when exposed to combinations of light & temperature)
- (3): 411 (Na pentachlorophenate & dehydroabietic acid as reference toxicants for standardizing bioassays)
- (3): 422 (amino acid supplementation of soybean meal in fingerling diet)
- (4): 485 (temperatures selected & avoided at various acclimation temperatures)
- (4): 493 (temperature effects on development & survival in acid waters)
- (4): 515 (metabolism of a dichloronitrosalicylanilide insecticide (Bayer 73))
- (4): 551 (statistical estimation for normal blood chemistry ranges & variance in Shasta strain of)
- (5): 633 (spawning behavior in laboratory flumes)
- (5): 661 (effect of DDT & M.S. 222 on learning a simple conditioned response)
- (5): 699 (simple & rapid technique for repeated blood sampling)
- (6): 785 (DDT effect on discriminating ability)
- (8): 1249 (isolation & identification of pulp mill bleach effluents toxic to young)
- (8): 1289 (characterization & subcellular localization of leucine aminonaphthylamidase in blood & tissues)
- (9): 1545 (water temperature re ceratomyxosis in)
- (9): 1633 (lecithin biosynthesis by cholinephosphotransferase pathway in liver microsomes, re environmental temperature acclimation)
- (9): 1648 (a fungal plant saprophyte, *Phoma herbarum*, pathogenic to)
- (11): 2005, 2015 (effects of mercuric chloride & methylmercuric chloride on fingerlings)
- (12): 2429 (establishment of an asymptomatic carrier state infection of enteric redmouth disease)
- (12): 2556 (toxicity of naturally occurring juvabione insect hormones to young)
- T 464 (see J 32(3): 411 reference above)
- 486 (toxicity of 1mol synthetic lubricant to)
- 502 (behavioral responses to drilling fluids)
- 510; 511; 512 (SW Man. prairie pothole lakes suitability for aquaculture of)
- 515 (purse-seine catches, Babine L., B.C., 1973 data record)
- 531 (sea cucumber meal as possible substitute for Atl. herring meal in diet)
- 538 (effects of various experimental diets on growth in salt water in Passamaquoddy Bay, N.B.)
- 573 (factors affecting acute toxicity of copper sulfate to)
- S 2009 (autonomic receptors in isolated vasculature)
- 2050 (morpholine as olfactory stimulus)
- 2056 (correlation between freshness of iced & lactic acid formation in muscle extracts)
- 2076 (biochemical & residue studies on, after field & laboratory exposures to fenitrothion pesticide)
- Trout, steelhead (*Salmo gairdneri*) (steelhead salmon, as anadromous rainbow trout; see also Trout, rainbow)
- J 32(4): 554 (acute toxicity of kanamycin to)
- (5): 667 (aspects of winter ecology of young in a stream)
- (9): 1553 (water temperature re infection by *Flexibacter columnaris* (columnaris disease))
- (12): 2582 (history of global fight for survival (book review))
- CNG 99 (biology aspects & fishery from 3 years of anglers' catches, Nanaimo R., B.C.)
- Trout Brook, N.B.
- J 32(11): 2069 (abundance & population dynamics of parasites infecting Atl. salmon)
- Trout-perch (*Percopsis omiscomaycus*)
- J 32(11): 1989 (in Great Bear R. headwaters, N.W.T.)
- T 547 (taken at a highway crossing of Mackenzie R. tributary, N.W.T.)
- Trouts (in general or unspecified; see also *Salmo* and common names of species)
- J 32(2): 249 (selenium determination in tissues)
- (9): 1663 (terminology of intervals & stages of development)
- CHN 55 (fish oils as source of pigments in feeds to enhance pink color of flesh)
- T 562 (research problems in B.C. stream ecology)
- Tucuxi (*Sotalia fluviatilis*) (an upper Amazon River dolphin)
- J 32(7): 908 (overview)
- S 2070; 2080 (melon, jaw, & blubber lipids; echolocation lipids re habitat)
- Tumors (see also Lesions)
- J 32(10): 1723 (epizootiology of skin, in a population of young English sole, Puget Sound, Wash.)
- Turbidity (see also Effluents; Estuaries; Sediments)
- T 502 (of drilling effluents: effects on lake whitefish & rainbow trout behavior)
- 547; 556(1); 556(2) (Secchi disc measurements of, in

- waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
 S 2054 (effect on solar radiation & primary productivity in arctic S Beaufort Sea)
- Turbot (Pacific) (see Flounder, Arrowtooth)
- Turbot, Greenland (see Halibut, Greenland)
- Turner, Ruth D.
 J 32(5): 719 (review of book on the shell makers, introducing mollusks)
- Tursiops truncatus* (see Dolphin, bottlenose)
- Tyrosine (see Acids, amino)
- U**
- Udey, Lanny R.
 J 32(9): 1545 (water temperature re ceratomyxosis in rainbow trout & coho salmon)
- Ultrasonics (see also Biotelemetry; Sounding, echo)
 J 32(2): 233 (for tracking sockeye salmon entering Skeena R. estuary, B.C.)
 (4): 559 (effect of dummy telemetry transmitters on Atl. salmon smolt swimming stamina)
 T 499 (automatic monitor for detecting & recording passage of transmitter-fitted fish in channels, also computer program for reading taped results)
 S 2034 (hydrophone for determining swimming depth of transmitter-fitted fish)
- Ulvaria subbifurcata* (see Shanny, radiated)
- United States of America (see International commissions; names of certain states)
- Upogebia pugettensis* (see Shrimp, mud)
- Upwelling (of water)
 J 32(9): 1607 (re respiratory energetics of red crab)
 S 2019 (in small lakes)
- Uranium derivatives (see also Power plants)
 A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Urchins (see Heart urchins; Sea urchins)
- Urea (see Excretion)
- Urine (see Excretion; Kidney)
- Urohyal
 J 32(2): 325 (in fishes (book review))
- Urophycis chuss* (see Hake, red)
tenuis (see Hake, white)
- Ursus maritimus* (see Bear, polar)
- Uruguay
 J 32(7): 1073 (biology of Franciscana (a dolphin) in waters of)
- Utne, Joh., Frederick
 S 2015 (determining chlorine in organic materials by combustion & microcoulometry)
 2020 (microdetermination of Hg in environmental materials)
 2029 (arsenic determination in marine organisms)
- Utilization (see Economics; Feed; Feedstuff; Fisheries; Fishery products; Food; Management; Quality of fishery products; also names of commercial fishes, also names of commercial products listed under the headings Mammals, marine; Mollusca; Seaweeds; Shellfish)
- Utter, Fred Madison
 J 32(4): 571 (review of book on genetic studies of fish)
- V**
- Vaisey, Florence Marion
 J 32(2): 227 (antioxidants for deterring deterioration of canned lake whitefish)
- van Banning, Paul
 J 32(1): 29 (identification of an *Anisakis* nematode larva as *A. simplex*)
- van der Veen, B.
 T 517 (electronic systems for continual monitoring of temperature, pH, conductivity, & dissolved oxygen)
- Van Loon, Jon Clement
 S 2008 (long-term acidification of a lake & resulting effects on fishes)
- van Overbeke, Abraham Pieter
 J 32(1): 11 (thiourea effects on sexually maturing & gonadectomized male Atl. salmon)
- Vanadium derivatives
 A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Vancouver Island, B.C. (see also Alberni Inlet; Carnation Creek; Great Central Lake; Holberg Inlet; Lymn Creek; Nanaimo River; Rupert Inlet)
 J 32(11): 2169 (movements, growth, age, & spawning of petrale sole off SW)
 T 496 (Pac. herring surveys offshore SW, 1972 & 1973)
- Varga, Sandor
 J 32(4): 541 (incidence of *Vibrio parahaemolyticus* in marine environment, animals, & products of Canadian Atl. coast)

Vasculature (see also Blood)

- S 2009 (autonomic receptors in isolated, of rainbow trout)

Veith, G. M.

- J 32(10): 1849 (apparatus for continuously saturating water with hydrophobic organic chemicals)

Velocity (see Currents; Flow; Swimming)

Velsen, Frank Peter John

- T 508 (constant-flow dosing apparatus for responses of fish to test solutions)

Venerupis japonica (see Clam, Manila littleneck)

staminea (see Clam, Pacific littleneck)

Vertebrae

- J 32(12): 2543 (pleomerism: vertebral number correlation with fish maximum body length, & its significance in taxonomy & fish biology)
S 2007 (number: effect of temperature & salinity on, in garfish)

Vertinsky, I.

- J 32(12): 2569 (international joint ventures in fishing & 200-mile economic zones)

Vibrio (see Bacteria)

Villeneuve, J. P.

- J 32(11): 2125 (degradation of phenolic compounds downstream from a petroleum oil refinery)

Vinyard, Gary Lee

- J 32(10): 1860 (dorsal light response as index of prey preference by bluegill)

Virginia State, USA

- J 32(8): 1447 (abundance of young witch flounder in Norfolk Canyon, off coast of)

Viruses (see also Disease)

- J 32(1): 92 (infectious pancreatic necrosis virus (IPN) appearing concurrently with bacterial kidney disease in hatchery rainbow & eastern brook trout)
(4): 523 (practical aspects of survival & destruction of IPN, when treated with chlorine or iodophor disinfectant)
(4): 563 (histological changes in channel catfish infected with channel catfish virus disease)
(4): 568 (frequency of detection & survival of IPN, in carrier population of brook trout in a lake)
(8): 1267 (survival & inactivation of IPN, under various conditions)
(8): 1437 (possible viral interference in isolation of IPN from carrier fish)

Vision (see Eye; Light, reaction of organisms to)

Vitamins

- J 32(6): 807 (tocopherol composition of frozen Atl. herring tissues & oil)
(9): 1643 (B-group, of lumpfish & menhaden meals)

Vulnerability (see Pollution; Predation; Toxicants)

W

Wacasey, Jervis Winn

- S 2055 (zoobenthos of S Beaufort Sea)

Waddy, Susan L.

- J 32(10): 1843 (temperature re hyperecdysionism in American lobsters injected with ecdysterone)
(12): 2441 (possible role of posterior lateral line in brook trout obstacle entrainment)
T 531 (harvesting, processing, & composition of sea cucumber meal as possible substitution for herring meal in trout diets)

Wagemann, Rudolf

- T 486 (chemical degradation & fish toxicity of a synthetic phosphate lubricant)
546; 556(1); 556(2) (chemistry, mineralogy, & transport rates of sediments in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
555 (flameless atomic absorption vs. other chemical & physical methods for determining trace metals in fresh water)

Waldichuk, Michael

- A 320 (local impacts of the law of the sea)
321 (review of book on oceanography, contemporary readings in ocean sciences)
324 (some biological concerns in heavy-metals pollution)

Walker, Brian Lawrence

- J 32(6): 807 (tocopherol composition of frozen Atl. herring tissues & oil)

Walker, William Allan

- J 32(7): 1197 (live-capture fishery for smaller cetaceans taken in S California for public display, 1966-73)

Walleye (*Stizostedion vitreum (vitreum)*) (yellow walleye)

- J 32(10): 1733 (environmental effects on W Lake Erie year-class strengths)
(10): 1745 (changes in Hg content, of long-preserved vs. modern, from Michigan waters)
(11): 1989 (distribution, Great Bear L., N.W.T.)
T 529 (effects of hydroelectric development on biology: reproduction, development, & population dynamics (literature review & bibliography))
(taken at highway crossing of a Mackenzie R. tributary, N.W.T.)
547 (determining lipid content of muscle in whole fish by ultrasonics)
S 2041

- Walrus (*Odobenus rosmarus rosmarus*)
T 507 (past, present, & future research in Canadian arctic)
- Walter, Gilbert Gustav
J 32(11): 2163 (graphical estimation of parameters in simple models for fisheries)
- Walters, Carl J.
J 32(1): 177 (interdisciplinary approach to development of watershed simulation models)
(10): 1777 (optimal harvest strategies for Skeena R., B.C., sockeye salmon)
- Ware, Daniel Morris
J 32(1): 33 (growth, metabolism, & optimal swimming speed of a pelagic fish (bleak))
- Warmouth (*Lepomis gulosus*)
J 32(10): 1799 (production in a new S Carolina impoundment)
- Washington, Lake, Wash., USA
J 32(1): 21 (speciation of a midwater *Cottus* sculpin population)
- Washington State, USA (see also Puget Sound; Skagit River valley, B.C.; Washington, Lake)
J 32(7): 1213 (live capture of killer whales for oceanaria)
(11): 2169 (movements, growth, & spawning of tagged petrale sole)
- Wastewaters; Stickwaters
B 189(F) (treatment of fish processing plant (French edition of 1974 English edition))
- Water, sea (see Sea water)
- Water content (see also Composition, chemical)
J 32(4): 507 (Nfld. & Labrador capelin, 1972-73)
- Waters, natural (see also Lakes; Limnology; Oceanography; Rivers; etc.; also names of bodies of water)
J 32(4): 493 (effect of temperature of acid lake waters on rainbow trout)
T 504; 566 (1000-reference bibliographies of Canadian fresh waters)
- Watson, Nelson Herbert Frank
T 525 (chlorophyll & primary production in L. Superior, May-Nov. 1973)
- Watt, Walton Delbert
J 32(1): 161 (ecological changes from hydroelectric development on Saint John R., N.B.)
- Watts, Eric George
J 32(1): 78 (Cu, Zn, & total protein levels in plasma of spawning migratory sockeye salmon)
- Wax esters (including types of fatty alcohol components) (see also Acids, fatty)
S 2068 (chemical characteristics of first recorded from a marine phytoplankter; isolation from *Chroomonas salina* cryptomonad)
2070; 2080 (in jaw & melon lipids of various whales, dolphins, & porpoises re their acoustical function)
2089 (utilization of white barracudina as source of)
- Webb, Paul Walters
B 190 (hydrodynamics & energetics of fish propulsion)
- Weber, Lavern John
J 32(11): 2153 (neuromuscular function & acetylcholinesterase inhibition in largemouth bass pectoral adductor muscle)
- Webster, Dwight Albert
J 32(8): 1359 (wild brook trout habits in a stream population during removal of nontrout species)
- Webster, Thomas Jerome Milligan
J 32(8): 1399 (sedimentation of organic matter in St. Margaret's Bay, N.S.)
- Wedemeyer, Gary A.
J 32(4): 551 (statistical estimating of normal blood chemistry ranges & variance in a rainbow trout strain)
- Weight (see also Growth; Length; Size)
J 32(2): 321 (estimating dry, of live unanesthetized fish by photography)
(10): 1852 (re mathematical model for appraising uptake & retention of contaminants by fish)
T 501 (wet & dry, re condition factor of winter starvation of cultured young coho salmon)
567 (cutthroat trout, Great Central L., Vancouver Is., B.C.)
573 (rainbow trout: effect on acute toxicity of CuSO_4)
- Weimer, R. T.
J 32(12): 2547 (threshold-induced bias in acoustic scattering cross-section estimates of individual fish)
- Weir, John Robert
J 32(8): 1466 (preface to perspective on 75 years of achievements by the Fisheries Research Board of Canada)
- Wellings, Sefton Robert
J 32(10): 1723 (epizootiology of tumors in a population of young English sole, Puget Sound, Wash.)
- West Indies
J 32(4): 499 (humpback whale population estimates)
(7): 1105 (dolphin & small-whale fisheries, particularly re St. Vincent)

- Westrheim, Sigurd Jerken
 J 32(12): 2399 (reproduction, maturation, & identification of larvae of 31 NE Pac. species (details not available from abstract only))
 (12): 2586 (review of book on optimum sustainable yield as a concept in fisheries management)
 T 497 (Pac. ocean perch biomass, underutilized groundfish species sampling, & bottom water temperature monitoring, Queen Charlotte Sound & Hecate Strait, Sept. 1974)
 565 (age re length of 25 *Sebastes* and a *Sebastolobus* species in NE Pac.)
- Whale, Andrews' beaked (*Mesoplodon bowdoini*)
 J 32(7): 899 (brief overview)
- Whale, Arnoux's beaked (*Berardius arnuxii*)
 J 32(7): 897 (brief overview)
- Whale, Baird's beaked (*Berardius bairdii*)
 J 32(7): 897-898 (overview), 948 (distribution), 956 (incidental catches), 1111, 1229 (Japanese commercial & incidental catches)
 S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Whale, Blainville's beaked (*Mesoplodon densirostris*) (dense-beaked whale)
 J 32(7): 899 (brief overview)
 (11): 2205 (chlorinated hydrocarbons in blubber)
 S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Whale, bowhead (*Balaena mysticetus*)
 T 507 (past, present, & future research in Canadian arctic)
 S 2053 (seasonal distribution in E Beaufort Sea)
- Whale, Cuvier's beaked (*Ziphius cavirostris*)
 J 32(7): 900 (overview), 947, 948 (distribution), 1095 (stranding mortality re population abundance in NE Atl.), 1111 (Japanese commercial catches)
 S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Whale, dense-beaked (see Whale, Blainville's beaked)
- Whale, dwarf sperm (*Kogia simus*)
 J 32(7): 904 (brief overview)
 S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Whale, false killer (*Pseudorca crassidens*)
 J 32(7): 912 (overview), 947, 949, 951 (distribution), 958 (incidental catches), 1095 (stranding mortality re population abundance in NE Pac.), 1105 (occurrence, history, & catches in St. Vincent Caribbean fisheries)
 S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Whale, fin (Antarctic) (*Balaenoptera physalus*)
 B 191: 30 (survival rate)
- Whale, Gervais' beaked (*Mesoplodon europaeus*)
 J 32(7): 899 (brief overview)
- Whale, ginkgo-toothed beaked (*Mesoplodon ginkgodens*)
 J 32(7): 899 (brief overview)
- Whale, Gray's beaked (*Mesoplodon grayi*)
 J 32(7): 899 (brief overview)
- Whale, Hector's beaked (*Mesoplodon hectori*)
 J 32(7): 899 (brief overview)
- Whale, Hubbs' beaked (*Mesoplodon carlhubbsi*)
 J 32(7): 899 (brief overview)
- Whale, humpback (*Megaptera novaeangliae*)
 J 32(4): 499 (population estimate of W Indies, by visual & acoustic techniques)
 (11): 2205 (chlorinated hydrocarbons levels in blubber)
- Whale, killer (*Orcinus orca*) (actually a dolphin)
 J 32(7): 914 (overview), 946-948, 951-952 (distribution), 1083 (Norwegian catches & biology), 1095 (stranding mortality re population abundance), 1105 (Caribbean catches), 1111 (Japanese fishery), 1123 (Chilean catches & research), 1191, 1213 (techniques of live capture for public display), 1237 (marking)
- Whale, long-finned pilot (*Globicephala melaena*) (northern pilot whale)
 J 32(7): 916 (overview), 950 (distribution), 956, 1223 (incidental capture), 961, 1237 (marking), 1079 (Greenland occurrence & exploitation), 1095 (stranding mortality re population abundance), 1111 (Japanese fishery), 1123 (Chilean catches & research)
 (7): 1101 (driven ashore in Ireland, 1800-1973)
 (7): 1145 (population models based on interaction with its feeding on short-finned squid, Nfld.)
 S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Whale, Longmann's beaked (*Mesoplodon pacificus*)
 J 32(7): 899 (brief overview)
- Whale, melon-headed (*Peponocephala electra*)
 J 32(7): 911 (overview), 949 (distribution)
- Whale, minke (*Balaenoptera acutorostrata*)
 J 32(7): 891-895 (overview), 945-947, 951-952 (distribution), 961, 962, 1237 (marking & tagging), 1079 (Greenland occurrence & exploitation), 1083, 1163 (Norwegian fishery & biological investigations), 1095 (stranding mortality re population abundance), 1111 (Japanese fishery)
 (7): 985 (catches & biology, Nfld. fishery)

- (7): 995 (biological parameters of antarctic, at virginal population levels)
(7): 1163 (meat, blubber, & oil products from Norwegian)
- Whale, northern bottlenose (*Hyperoodon ampullatus*)
J 32(7): 902-903 (overview), 945, 946 (distribution), 961, 1237 (marking), 1083, 1163 (Norwegian expansion of whaling; biology), 1095 (stranding mortality re population abundance)
(7): 1019 (biological details of a stranded, in Bay of Fundy, N.S.; also records of 9 other strandings on Atl. coast)
(7): 1163 (meat, blubber, & oil products from Norwegian)
S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Whale, northern pilot (see Whale, long-finned pilot)
- Whale, Pacific pilot (*Globicephalus scammoni*)
J 32(11): 2205 (chlorinated hydrocarbon levels in blubber)
- Whale, pygmy killer (*Feresa attenuata*)
J 32(7): 912 (overview), 947, 949 (distribution), 957 (incidental capture)
S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Whale, pygmy right (*Caperea marginata*)
J 32(7): 895 (overview), 947, 952 (distribution)
(7): 1005 (new records from South Africa, with comments on distribution, migration, appearance, & behavior)
- Whale, pygmy sperm (*Kogia breviceps*)
J 32(7): 904 (overview), 947 (distribution), 1095 (stranding mortality re population abundance), 1105 (fishery & catches in Caribbean)
- Whale, Shepherd's beaked (*Tasmacetus shepherdi*)
J 32(7): 896 (brief overview)
- Whale, short-finned pilot (*Globicephala macrorhynchus*)
J 32(7): 917-919 (overview), 947, 949 (distribution), 956 (incidental capture), 961, 1237 (marking), 962 (biotelemetric tracking), 1105 (occurrence, history, & catches in Caribbean fisheries), 1111 (Japanese fishery), 1191, 1197 (techniques of live capture for public display)
- Whale, southern bottlenose (*Hyperoodon planifrons*)
J 32(7): 903 (brief overview), 951, 952 (distribution), 961 (marking)
- Whale, Sowerby's beaked (*Mesoplodon bidens*)
J 32(7): 899 (brief overview), 1095 (stranding mortality re population abundance)
- Whale, sperm (*Physeter catodon*)
J 32(11): 2205 (chlorinated hydrocarbons levels in blubber)
S 2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Whale, Stejneger's beaked (*Mesoplodon stejnegeri*)
J 32(7): 899 (brief overview)
- Whale, strap-toothed (*Mesoplodon layardii*)
J 32(7): 899 (brief overview)
- Whale, True's beaked (*Mesoplodon mirus*)
J 32(7): 899 (brief overview), 1095 (stranding mortality re population abundance)
- Whale, white (*Delphinapterus leucas*) (beluga)
J 32(7): 905-906 (overview), 945, 946, 948 (distribution), 952, 954 (types of fishery), 1079 (occurrence & exploitation, Greenland), 1083 (expansion of Norwegian fishery; biology), 1095 (stranding mortality re population abundance), 1163 (Norwegian fishery techniques), 1191 (techniques of live capture for public display)
(7): 1047 (identity, abundance, & present status of populations in N America)
T 507 (past, present, & future research in Canadian arctic)
S 2053 (seasonal distribution in E Beaufort Sea)
2080 (comparative lipid patterns in acoustical & nonacoustical fatty tissues)
- Whales (see also names of species)
J 32(7): (an issue on biology & fisheries for smaller cetaceans, including some whales, also many porpoises and dolphins having a descriptive name of "whale")
(11): 2205 (chlorinated hydrocarbons in blubber of Atl.)
B 190 (hydrodynamics & energetics of propulsion (not indexed separately in this index; see its indexes))
S 2070; 2079; 2080 (sound production & interpretation by)
- Whelk (*Thais lamellosa*)
MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
- Whitefish, lake (*Coregonus clupeaformis*)
J 32(2): 227 (antioxidants effects on oxidative deterioration of canned)
(2): 283 (spawning in Aishihik L. & E Aishihik R., Yukon)
(2): 295 (cytotaxonomy re that of inconnu)
(3): 404 (fecundity of various stocks in 4 N.W.T. lakes)
(3): 427 (dynamics of exploited populations & their management, particularly in N.W.T.)
(11): 1989 (distribution, Great Bear L., N.W.T.)
(11): 2065 (proliferative tumorlike lesions on bone)
T 502 (behavioral responses to drilling fluids)

- 515 (purse-seine catches, Babine L., B.C., 1973 data record)
- 527 (effects of hydroelectric development on biology: reproduction, development, & population dynamics (literature review & bibliography))
- S 2041 (determining lipid content of muscle in whole fish by ultrasonics)
- Whitefish, mountain (*Prosopium williamsoni*) (Rocky Mountain whitefish)
- T 515 (purse-seine catches, Babine L., B.C., 1973 data record)
- Whitefish, pygmy (*Prosopium coulteri*)
- T 515 (purse-seine catches, Babine L., B.C., 1973 data record)
- Whitefish, Rocky mountain (see Whitefish, mountain)
- Whitefish, round (*Prosopium cylindraceum*)
- J 32(2): 283 (spawning in Aishihik L. & E Aishihik R., Yukon)
- Whiting (see Pollock, walleye)
- Whiting, blue (*Micromesistius poutassou*)
- J 32(6): 747 (utilization for human consumption)
- Whyte, John Nimmo Crosby
- T 509 (*Nereocystis luetkeana* seaweed elemental composition over growing season)
- 561 (estimating halogen content of *N. luetkeana* over growing season)
- 568 (composition of nonmetallic inorganic components of *N. luetkeana* over growing season)
- Wickett, William Percy
- T 522; 540 (sea water transport computations for N Pac. Ocean, 1973; 1974)
- Wiens, Alan Peter
- T 557 (species list of aquatic plants & animals collected from waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems, 1971-73)
- Williams, George, Jr.
- J 32(1): 69 (Furanace antimicrobial effects on mummichog embryos)
- Williams, George Charles
- J 32(11): 2197 (dieldrin effects on young channel catfish)
- Willis, Douglas Edwin
- S 2046 (biphenyl hydroxylation in vitro by tissue of some marine organisms)
- Wind
- S 2085 (re turbulent diffusion from a continuous source acting on a sea)
- Windowpane (*Scophthalmus aquosus*) (brill)
- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- Winn, Howard Elliot
- J 32(4): 499 (visual & acoustic estimate of humpback whale population in West Indies)
- (11): 2205 (chlorinated hydrocarbons in cetaceans)
- Winnipeg, Lake, Man.
- J 32(1): 106 (environmental impact of Churchill & Nelson rivers hydroelectric developments on)
- S 2024 (rates of N & P nutrients supply to, re diversion of Missouri R. water into Red & Assiniboine rivers)
- Winterkill (of fish) (see also Ice; Season effects; Summerkill)
- J 32(11): 2214 (yellow perch fat content re greater mortality of females, in 2 Que. lakes)
- T 510; 511 (in SW Man. prairie ponds & lakes)
- S 2019 (in SW Man. prairie ponds & lakes)
- Winters, George Henry
- J 32(8): 1347 (migrations & biology of Atl. mackerel in Nfld. waters)
- Withler, Frederick Curtis
- J 32(12): 2582 (review of book on history of salmon's fight for survival)
- CNG 99 (biology & fishery of Nanaimo R. steelhead trout from 3 years of anglers' catches)
- Wobeser, Gary Arthur
- J 32(11): 2005, 2015 (toxicity of mercury compounds to young rainbow trout)
- (11): 2065 (proliferative bone lesions in lake whitefish)
- Wojtowicz, Maria Barbara
- CHN 49 (processing of rock crab by meat separators)
- Wolf (arctic) (*Canis lupus*)
- J 32(6): 795 (mercury in, from Holman, N.W.T.)
- Wolf, Ken
- J 32(2): 325 (review of book on diseases of fish)
- Wolfe, Douglas Arthur
- J 32(10): 1767 (mercury & iron uptake by quahog clam mantle cells)
- Wolffish, Atlantic (*Anarhichus lupus*)
- T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)
- 526 30 (incidental to groundfish fishery in ICNAF areas)
- Wolman, Allen Alexander
- J 32(7): 1213 (live-capture killer whale fishery, B.C. & Washington, 1962-73)
- Wong, Joseph
- B 189(F) (fish processing plant wastewater treatment)

- T 575 (quality & quantity of deboned flesh recovered from various B.C. underutilized marine fishes)
 S 2026 (simple chemical isolation of bone fragments in minced fish flesh)
 Wrack, bladder (*Fucus* sp.)
 MSP 26 (drawing, typical of Gulf Is. marine parks, B.C.)
 Wrymouth (*Cryptacanthodes maculatus*)
 T 490; 521 (immature stages in Gulf of St. Lawrence plankton collections, 1968; 1969)

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- Xanthates (see Flotation)
Xiphister atropurpureus (see Prickleback, black)
Xiphias gladius (see Swordfish)
 Xylenols (see Phenols)

Y

- Yamamoto, Masanobu
 T 569 (quality & quantity of herring roe produced under B.C. industrial processing conditions)
 575 (quality & quantity of deboned flesh recovered from various B.C. underutilized marine fishes)
 S 2026 (simple chemical isolation of bone fragments in minced fish flesh)
 Yamamoto, Tatsuzo
 J 32(1): 92 (IPN virus & bacterial kidney disease concurrent in 2 trout species)
 (4): 568 (detection & survival of IPN virus in a carrier population of brook trout in a lake)
 Yasutake, William Toshio
 J 32(9): 1648 (a fungal plant saprophyte, *Phoma herbarum*, as a fish pathogen)
 Year-classes (see Age)
 Yellowknife, N.W.T.
 J 32(3): 404 (fecundity comparisons for various lake whitefish stocks in 4 lakes near)
 T 533 (experimental cropping of lakes near; phytoplankton & zooplankton)
 Yellowtail (see Flounder, yellowtail)
 Yield (see also Angling; Catches; Fisheries; Management; Resources)
 J 32(3): 427 (for fishing effort re dynamics of exploited lake whitefish populations & their management, particularly in N.W.T.)
 (8): 1305 (possibility of increased scallop yield from Georges Bank off N.S.)

- (8): 1369 (revised interpretation of commercial & maximum sustained, for Skeena R., B.C., sockeye salmon)
 (10): 1777 (optimal harvest strategies for Skeena R. sockeye salmon)
 (10): 1825 (maximum sustained, re commercial exploitation in biologically & technologically interdependent fisheries (mathematical analysis))
 (11): 2137 (estimating potential, of fish (e.g. *Tilapia nilotica*) from Nasser Reservoir, Egypt)
 (12): 2586 (optimum sustainable, as a concept in fisheries management (review of a published symposium))

Y-organ (see Molting)

- York, Roberta K.
 T 574 (pilot plant application of processing improved formulated breaded product from flesh of mechanically deboned freshwater fish (e.g. white sucker), & judging of quality by taste panel)
 Youngs, William Durwood
 J 32(12): 2365 (estimating survival rate from tag returns from angler-caught fish)

- Yukon (Territory (Yuk.), Canada) (see note to heading Porcupine River drainage system. Many creeks and smaller rivers about which data are given in the Technical Reports listed in that note are not indexed separately; see also Caribou Bar Creek)
 J 32(2): 283 (spawning of lake & round whitefish in Aishihik L. & R.)
 T 504; 566 (alphabetical lists of freshwater bodies, keyed to bibliography of further 1000 references to Canadian limnology & fisheries)

Z

- Zala, C. A.
 J 32(12): 2479 (daily pattern of urea & ammonia excretion & oxygen consumption of young sockeye salmon under controlled conditions)
Zalophus californianus californianus (see Sea lion, California)
 Zebra fish (*Brachydanio rerio*)
 J 32(6): 803 (selenium toxicity to early life stages)
 Zimmerman, J.
 T 569 (quality & quantity of herring roe produced under B.C. industrial processing conditions)
 Zinc derivatives
 J 32(1): 1 (temperature-induced changes in acute toxicity of ion to Atl. salmon)
 (1): 78 (levels in plasma of spawning migratory sockeye salmon)

- (8): 1339 (relative importance of feed & water in long-term ^{65}Zn accumulation by marine biota)
- (9): 1643 (in lumpfish & menhaden meals)
- (12): 2357 (young coho salmon blood cell counts sensitivity to stress from sublethal exposure to)
- (12): 2552 (uptake by Atl. salmon at 3 different temperatures)
- T 488 (literature review of mine effluents effects on aquatic ecosystems)
- 489 (literature review of Canadian textile industry effluents effects on aquatic organisms)
- 498 (analysis for, in feathers)
- 506 (distribution in submerged tailing plumes, Rupert & Holberg inlets, B.C.)
- 509 (variation of amount in B.C. kelp during growing season)
- 531 (in Atl. sea cucumber meal)
- 555 (comparison of methods for determining in fresh water)
- 556(1); 556(2) (in waters of Mackenzie R. (N.W.T.) & Porcupine R. (Yukon) systems)
- 564 (in waters of Carnation Creek, Vancouver Is., B.C.)
- S 2086 (in phytoplankton & 2 zooplankton species, St. Margaret's Bay, N.S.)
- A 324 (environmental pollutive potential & toxicity re biological uptake (review))
- Zinn, Jerry Lee
- J 32(9): 1553 (water temperature re *Flexibacter columnaris* infection in steelhead trout, coho & chinook salmon)
- Ziphius cavirostris* (see Whale, Cuvier's beaked)
- Zitko, Vladimir
- T 491 (properties, uses, & pollution potential of chlorinated paraffins)
- 518 (chemistry, applications, toxicity, & pollution potential of thallium)
- S 2038 (determining pentachlorophenol & chlorobiphenyls in biological samples)
- 2049 (thallium occurrence in environment & toxicity to fish)
- Zoobenthos (see Benthos; Invertebrates; Sediments)
- Zoogeography (see Distribution)
- Zooplankton (see also classifications of; also Feed; Plankton)
- J 31(3): 347 (tidal & diurnal effects on sample variability in a nearshore W. Atl. environment)
- (3): 389 (midsummer crustacean communities in acid-stressed lakes)
- (9): 1589 (effects of goldfish predation on 3 types, of small saline lake)
- (11): 1989 (Great Bear L., N.W.T., re fish species distribution)
- T 490; 512 (eggs, larvae, & young fishes in Gulf of St. Lawrence, 1968; 1969)
- 533 (re experimental cropping of lakes near Yellowknife, N.W.T.)
- S 2046 (live, in vitro hydroxylation of biphenyl constituent of PCB)
- 2075 (re production efficiency in marine planktonic communities)
- Zostera marina* (see Eelgrass)
- Zygoptera (see Odonata)

APPENDIX

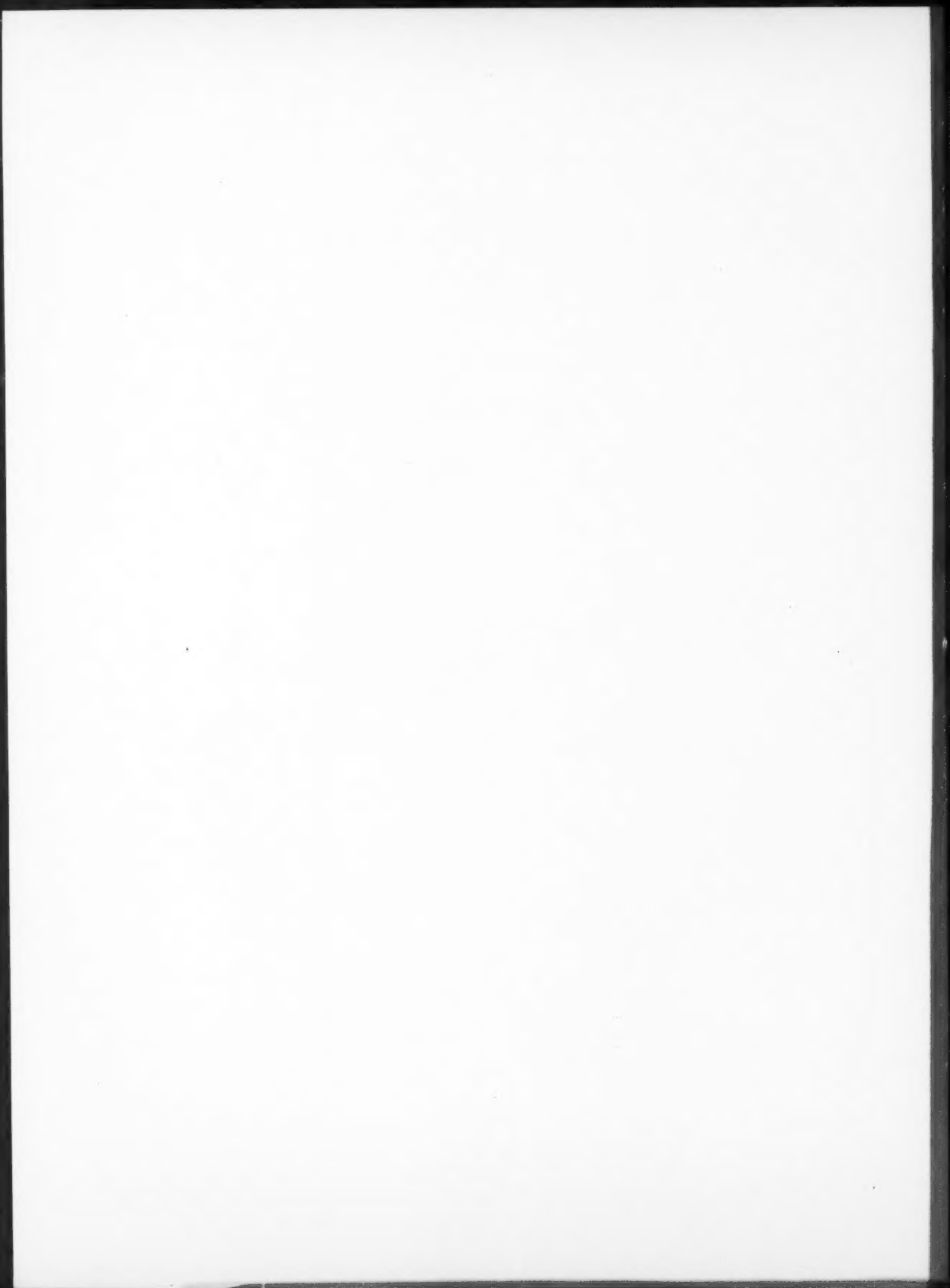
LIST OF PUBLICATIONS AND TITLES 1975

**DEALING WITH WORK OF
FISHERIES AND MARINE SERVICE**

ANNEXE

LISTE DE PUBLICATIONS ET DE TITRES 1975

**AYANT TRAIT AU TRAVAIL DU
SERVICE DES PÊCHES ET DES SCIENCES DE LA MER**



JOURNAL OF THE FISHERIES RESEARCH BOARD OF CANADA

JOURNAL DE L'OFFICE DES RECHERCHES SUR LES PÊCHERIES DU CANADA

Abbreviation: J
Volume 32 (1975)

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Effects of thiourea treatment on sexually maturing and gonadectomized male sockeye salmon (<i>Oncorhynchus nerka</i>)	J. R. McBride and A. P. van Overbeek	11-19
Systematic status of a midwater population of freshwater sculpin (<i>Cottus</i>) from Lake Washington, Seattle, Washington	K. W. Larson and G. W. Brown Jr.	21-28
Identification of <i>Anisakis</i> larva (I) as <i>Anisakis simplex</i> (Rudolphi, 1809, det. Krabbe 1878) (Nematoda: Ascaridata)	J. H. C. Pippy and P. van Banning	29-32
Growth, metabolism, and optimal swimming speed of a pelagic fish	D. M. Ware	33-41
Age and growth of dogfish, <i>Squalus acanthias</i> , in British Columbia waters	K. S. Ketchen	43-59

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Hybridization in sunfishes (<i>Lepomis</i> , Centrarchidae) based on time-growth and static allometry	R. K. Misra	88-91
Infectious pancreatic necrosis virus and bacterial kidney disease appearing concurrently in populations of <i>Salmo gairdneri</i> and <i>Salvelinus fontinalis</i>	T. Yamamoto	92-95

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Oxidative deterioration of canned lake whitefish (<i>Coregonus clupeaformis</i>) treated with antioxidants	C. A. Biggar, N. A. M. Eskin, M. Vaisey, and B. Johnston	227-232
Movements of sockeye salmon (<i>Oncorhynchus nerka</i>) in the Skeena River estuary as revealed by ultrasonic tracking	C. Groot, K. Simpson, I. Todd, P. D. Murray, and G. A. Buxton	233-242
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Book Reviews/Comptes rendus

- The early life history of fish (J. H. S. Blaxter [ed.]) E. D. Houde 1933-1935
- Coupling of land and water systems (A. Hasler [ed.]) P. J. Dillon 1935

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CIRCULARS

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TECHNICAL REPORTS/RAPPORTS TECHNIQUES

Abbreviation: T

(NOTE: Numbers 464, 467, 468, and 476 at the beginning of this list were issued too late for listing and indexing in previous indexes. They are indexed herein. The numerals in parentheses at the end of each reference indicate the name of the establishment from which the information or the Report originated and to which request for a copy can be made. See page 2600-2601 for addresses corresponding to these numerals.)

(REMARQUE: Les numéros 464, 467, 468 et 476 au début de cette liste sont sortis trop tard pour les inclure dans les indexes antérieurs. Le numéro entre parenthèses, à la fin de chaque référence, indique l'établissement d'où provient la documentation du rapport et auquel on peut en demander un exemplaire. Voir au pages 2600-2601 les adresses correspondant à ces numéros.)

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 2082. SCHERER, E. 1975. Avoidance of fenitrothion by goldfish (*Carassius auratus*). Bull. Environ. Contam. Toxicol. 13(4): 492-496. (4)
 2083. SMITH, T. G. 1974. Rough-legged hawks, *Buteo lagopus* (Pontoppidan) as carrion feeders in the Arctic. Can. Field-Nat. 89: p. 190. (5)
 2084. LORING, D. H. 1974. Surficial geology of the Gulf of St. Lawrence. Offshore Geol. East. Can., Geol. Surv. Can. 2: 11-33. (7)
 2085. BOWDEN, K. F., D. P. KRAUEL, AND R. E. LEWIS. 1974. Some features of turbulent diffusion from a continuous source at sea. Adv. Geophys. 18A: 315-329. (7)
 2086. MAYZAUD, P., AND J.-L. M. MARTIN. 1975. Some aspects of biochemical and mineral composition of marine plankton. J. Exp. Mar. Biol. Ecol. 17: 297-310. (7)
 2087. ANTIA, N. J., R. S. KRIPPS, AND I. D. DESAI. 1975. L-theonine deaminase in marine planktonic algae. V. Kinetic evaluation of feedback effects from structural analogs of L-isoleucine on the deaminase activity of seven unicellular species and elucidation of the allosteric basis for anomalous feedback control shown by a diatom and a cryptomonad. J. Phycol. 11(1): 60-69. (2)
 2088. ACKMAN, R. G. 1974. Marine lipids and fatty acids in human nutrition. Fish. News (Books) Ltd. p. 112-131. (8)
 2089. ACKMAN, R. G., C. A. EATON, AND P. J. KE. 1974.

Utilization of barracudina as a source of wax esters and proteins. Fish. News (Books) Ltd. p. 221-226. (8)

INTERPRETIVE ARTICLES/ARTICLES EXPLICATIFS

Abbreviation: A

(NOTE: The numeral in parentheses at the end of each reference indicates the name of the Fisheries and Marine Service establishment from which request for a copy can be made. See pages 2600–2601 for addresses corresponding to these numerals.)

(REMARQUE: Le numéro entre parenthèses, à la fin de chaque référence, indique l'établissement du Service des pêches et des sciences de la mer d'où provient la documentation du rapport et auquel on peut en demander un exemplaire. Voir au pages 2600–2601 les adresses correspondant à ces numéros.)

320. WALDICHUK, M. 1973. Oil and hard minerals. Scientific research issues. Proc. Conf. Local Impacts of Law of the Sea, Oct. 10–12, 1972. Div. Mar. Resour. Univ. Wash. p. 120–133. (3)
321. WALDICHUK, M. 1974. Book review of: Oceanography, contemporary readings in ocean sciences (R. G. Pirie). Ocean Manage. 21: 185–187. (3)
322. SANDEMAN, E. J. 1973. Shrimps and shrimp fishing in the Atlantic provinces. Fish. Mar. Serv. Fish. Fact Sheet 6: 4 p. (9)
323. JANGAARD, P. M. 1974. Lobsters. Encycl. Food Technol. 2: 554–557. (12)
324. WALDICHUK, M. 1974. Some biological concerns in heavy metals pollution. Pollut. Physiol. Mar. Org. 57 p. (3)
325. SANDEMAN, E. J. 1974. Offshore renewable resources and their management. Can. Ship. Mar. Engineer. 45(7): 29–31. (9)
326. DOWD, R. G. 1974. A computerized echo counting system for demersal fishes. Edmunds Newhall Assoc. Ltd., and Montreal Engineer. Co. Ltd. 196 p. (7)
327. KABATA, Z. 1974. Book review of: Parasites and diseases of fishes and aquatic invertebrates (O. N. Bauer). J. Fish Biol. 6: 541. (1)
328. BLIGH, E. G., W. J. DYER, L. W. REGIER, J. R. DINGLE, AND R. LEGENDRE, 1974. Functional and nutritive food proteins from fish. Fish. News (Books) Ltd. p. 290–291. (8)

Guide for Authors

A more detailed guide on preparation of manuscripts from theses is available from the Office of the Editor.

CONTENT

We invite submission of manuscripts in the broad field of fisheries management, ocean science, and aquatic environments relevant to Canada.

Articles: Reports of research studies of broad scope that are original contributions to science.

Notes: Differ from papers on the basis of scope or completeness, rather than quality of research. They may be on problems with narrow, readily defined limits; on work that is largely confirmatory; on methodology or research techniques; on advances in knowledge arising as by-products of broader studies; on progress in projects that were discontinued; or on preliminary findings that warrant publication before problems are resolved. They may be organized with as much flexibility as articles except that they have no centered headings and should occupy no more than four printed pages.

Reviews: Detailed articles that are critical appraisals of broad areas of investigation, particularly in fields that have shown rapid development in recent years.

Perspectives: Essays of opinion or hypothesis on fisheries, ocean science, aquatic environments, or related topics that are of concern to the professional and layman. References are desirable; informal style is welcomed.

Letters: Opinion on topics recently under discussion in the *Journal*; preferred maximum length, 500 words. The Editor reserves the right to shorten letters and to make other changes to accord with the style of the *Journal*.

EDITORIAL PRACTICES

The *Style Manual for Biological Journals* (3rd ed. American Institute of Biological Sciences, 3900 Wisconsin Ave. NW., Washington, D.C.) is used as the authority in matters of form. The standards for spelling are: *Webster's Third New International Dictionary* and *le Grand Larousse Encyclopédique*. Titles of periodicals are abbreviated as in the *Biological Abstracts* list. References to literature are made by the name-and-year system. The *Journal* follows the names and spelling recommended in *A List of Common and Scientific Names of Fishes from the United States and Canada* (3rd ed., 1970) Special Publication No. 6 of the American Fisheries Society.

Series titles should be avoided. An **abstract** is required for all manuscripts, and should state concisely in less than 250

words, what was done, the essentials of the new knowledge, and the main conclusions. Abstracts are published in English and French; those submitted in one language only are translated by the *Journal*.

The Editor normally submits each manuscript to at least two referees. Contributors are encouraged to suggest at least four names to be added to the list from which referees may be selected.

Illustrations should be submitted as photographic reproductions no larger than a standard page and must accompany the manuscript. Prints should not be mounted, stapled, or clipped. Symbols, letters, and numerals must be neat, and at least 1.5 mm high when the illustration is reduced to the appropriate size. Drawings should, when possible, be grouped to facilitate comparisons.

Proofs are sent to the author, who is responsible for correcting only errors in typesetting. *Alterations to the content must be avoided.*

Fifty reprints are supplied free. Additional reprints may be purchased at the time of publication (an order form is sent out with the galley proof). All orders should be sent to the Printing Department, University of Toronto Press, 5201 Dufferin Street, Downsview, Ont. M3H 5T8. Invoices relating to the reprints will be sent out by the Printer. A charge of \$40.00 per page is made for articles published. When submitting a manuscript, an author should state that his institution will accept this charge.

CHECKLIST ON MANUSCRIPTS

Attention to the following questions will expedite appraisal of manuscripts by referees and editors.

Are the findings, interpretations, and conclusions adequately documented and relevant to the purpose of the study?

Are all the tables and figures needed, and organized to facilitate comparisons? Are there inconsistencies between tables or figures and the text, or within the text? Should some of the data be made available separately, in a manuscript report or at a data repository? If you use statistical analysis are the statistics subordinate to the research?

Would any of the text be clearer if condensed? Are summary statements given at the beginnings of sections and paragraphs, and are details in sections and paragraphs relevant to their topics? Does the organization of the manuscript follow logically from the statement of purpose in the introduction?

Does the *title* encompass the content of the report?

Does the *abstract* give the essentials of the new knowledge?

Is the *introduction* largely limited to the scope, purpose, and rationale of the study? Is review of the literature limited to defining the problem?

Are details of *materials and methods* limited to what scientists need in understanding the design of the study and in judging adequacy of the data?

Are generalizations on the *results* adequate? Are findings distinguished from inferences from them?

Is *discussion* limited to interpretation and significance of the findings?

Guide des Auteurs

On peut se procurer au bureau du Directeur de la publication un guide plus détaillé pour la préparation de manuscrits à partir de thèses.

SUJETS

Nous désirons recevoir des manuscrits s'insérant dans le vaste domaine de la gestion des pêches, des sciences de la mer et des milieux aquatiques au Canada.

Articles: Comptes rendus d'études d'une portée générale, constituant des contributions inédites à la science.

Notes: Se distinguent des articles par la portée et le degré d'achèvement plutôt que par la qualité des recherches. Elles peuvent traiter de problèmes particuliers et bien définis; de travaux qui sont en grande partie confirmatoires; de méthodologie ou de techniques de recherche; de progrès de la connaissance découlant d'études plus vastes; de développements dans des projets abandonnés; ou de découvertes préliminaires qui méritent d'être publiées avant la solution de problèmes à l'étude. Les notes peuvent être présentées d'une façon aussi souple que les articles, mais elles ne doivent pas porter d'en-têtes centrés ni occuper plus de quatre pages.

Critiques: Articles détaillés constituant une appréciation critique de vastes champs de recherches, particulièrement dans les domaines ayant connu de rapides progrès au cours des dernières années.

Perspectives: Essais de l'Opinion ou de l'hypothèses sur les pêches, les sciences de la mer, les milieux aquatiques, ou sur des sujets connexes qui intéressent professionnels et profanes. Il est préférable de donner des références et d'écrire, si possible, dans un style simple.

Lettres: Opinions sur des sujets exposés dans le *Journal*. Longueur maximale préférable: 500 mots. Le directeur se réserve le droit de raccourcir les lettres et de faire d'autres modifications dans le style du *Journal*.

DISPOSITIONS GÉNÉRALES

Le *Style Manual for Biological Journals* (3e éd., publié par l'American Institute of Biological Sciences, 3900 avenue Wisconsin N.O., Washington, D.C.) sert de guide quant à la forme de présentation. Le *Webster's Third New International Dictionary* et le *Grand Larousse Encyclopédique* font autorité pour l'orthographe des mots. Les titres de périodiques sont abrégés suivant les *Biological Abstracts*. Les références bibliographiques dans le texte doivent suivre le système nom de l'auteur-année. Pour les noms de poissons et leur orthographe, le *Journal* suit les recommandations contenues dans *A List of Common and Scientific Names of Fishes from the United States and Canada* (Troisième édition, 1970), Publication spéciale No. 6 de l'American Fisheries Society.

Il faut éviter les *articles en série*. Un *résumé* doit accompagner chaque texte et doit exposer brièvement (moins de 250 mots) le travail accompli, les points essentiels des connais-

sances acquises et les principales conclusions, le *Journal* veillant à la traduction dans le cas des présentations unilingues.

Le directeur soumet d'ordinaire chaque texte à l'approbation de deux arbitres ou plus. Nous encourageons les collaborateurs à suggérer au moins quatre personnes dont les noms pourraient figurer sur la liste des arbitres.

Les *illustrations* doivent être sous forme de reproduction photographique, ne pas dépasser les dimensions d'une page normale et accompagner le texte. Elles ne doivent pas être montées, coupées ni brochées. Les symboles, lettres ou chiffres doivent se détacher avec précision et avoir au moins 1,5 mm de hauteur lorsque l'illustration est réduite à la grandeur voulue. Les dessins doivent, autant que possible, être groupés pour faciliter l'étude comparative.

L'auteur doit revoir les *épreuves* qu'on lui remet et en corriger seulement les erreurs typographiques. Il doit éviter de changer le contenu du texte.

Cinquante tirés à part sont fournis gratuitement. Les tirés à part peuvent être achetés au moment de la publication. Un bon de commande à cet effet accompagne les épreuves; il doit être retourné en même temps que celles-ci, non pas au bureau de la rédaction, mais au Printing Department, University of Toronto Press, 5201 Dufferin Street, Downsview, Ont. M3H 5T8, qui se chargera de la facturer. Les frais sont de \$40.00 par page pour la publication des articles. Quand un auteur soumet un manuscrit, il doit spécifier que son institution accepte les frais.

LISTES DE CONTRÔLES POUR MANUSCRITS

Une attention particulière aux questions suivantes facilitera l'évaluation des manuscrits par les arbitres et les éditeurs.

Les découvertes, interprétations et conclusions sont-elles bien documentées et pertinentes au but de l'étude?

Les tableaux et figures sont-ils tous nécessaires et agencés pour faciliter les comparaisons? Y a-t-il contradiction entre les tableaux ou les figures et le texte, ou dans le texte même? Est-ce que certaines données devraient être présentées séparément, dans un rapport manuscrit ou dans un dépôt de données? Si vous faites une analyse statistique, la statistique cède-t-elle le pas à la recherche?

Le texte gagnerait-il en clarté s'il était plus condensé, en tout ou en partie? Contient-il des exposés sommaires au début de chaque section ou paragraphe, et les détails de ces sections et paragraphes sont-ils pertinents au sujet traité? La marche du manuscrit est-elle conforme à la logique énoncée dans l'introduction?

Le titre est-il concis, tout en étant représentatif du contenu du rapport?

Le *résumé* donne-t-il l'essentiel des connaissances nouvelles?

L'*introduction* se limite-t-elle à une esquisse de la portée, du but et des raisons de l'étude? La revue de la littérature se limite-t-elle à définition du problème?

La section *matériel et méthode* contient-elle le minimum de détails qui permettront aux autres scientifiques de saisir les grandes lignes de l'étude et de juger de la valeur des données?

Les généralisations sur les *résultats* sont-elles adéquates? Permettent-elles de distinguer entre constatations et deductions?

La *discussion* est-elle limitée à l'interprétation et à l'évaluation des découvertes?

Guide for Typists Preparing Copy

Read "Guide to Authors" in the current volume of the *Journal*. When in doubt about how to type or arrange details, follow *Journal* practice.

Type the manuscript on white bond paper, not flimsy, preferably size 21.5 × 28 cm (8.5 × 11 inches). If possible, use paper with the lines numbered in the margin. Leave all margins at least 2.5 cm wide.

Double-space all parts of the manuscript, including tables, captions for illustrations, footnotes, and the reference list. Underline only material that is to be printed in italics. Indent the first line of each paragraph in the text and of each footnote.

In titles and headings, capitalize the first letter of each word. For small capitals, use small letters.

Indicate all text footnotes by superscript arabic numerals. Number them consecutively throughout the manuscript, starting with those on the title page. Place each footnote immediately below the reference to it, separating it from the text by horizontal lines.

On the first page type only the title, the authors' names and affiliations, related footnotes, and the running head (see Appendix A). Type the abstract on a separate page (see Appendix B). Number all pages, beginning with the title page and including those for tables and captions for illustrations.

Have the author check the finished manuscript, and send the ribbon copy and two other clear copies to the Office of the Editor.

Tables: Examine the current volume of the *Journal* to see how tables are set up (see Appendix C). Note especially the following concerning *numbered tables*:

Type each on a separate page, using paper without the lines numbered.

Number them with arabic numerals.

Use horizontal lines above and below the headings and below the columns, and seldom elsewhere. Never use vertical lines; leave extra spaces instead.

Indicate table footnotes by superscript small letters and type them below the table.

Place the tables after the list of references.

Where each table is first referred to, type in the margin "Table — near here."

Note that *text tables* are not numbered, are typed with the text, and seldom need horizontal lines (see Appendix C).

Illustrations: Send a photographic reproduction (no larger than 21.5 × 28 cm) of each illustration with the manuscript. Type the author's name and figure number on a strip of paper and fasten it to the back of the print. Do not write or type on the print itself. Also, type the captions in succession on a separate page, headed "Captions for illustrations." Put this page at the end of the manuscript.

Where each figure is first referred to, type in the margin "Fig. — near here."

Mathematical Expressions, Equations, and Formulas: Leave three spaces above and below lines that have much material in superscripts, and above and below equations and formulas. In the various expressions, place each component in its correct position (see Appendix D).

Show all symbols clearly. In the margin, spell out Greek letters the first time they occur, and distinguish between the small letter *l* and the numeral *one*, and between the capital letter *O* and the numeral *zero*. Make other explanatory notes similarly.

References: Check the text to see that all references in the list are referred to. Type the reference list, double-spaced, in the style used in the *Journal* (see Appendix E). Names of journals are abbreviated as in the *Biological Abstracts* list; if an abbreviation is in doubt, type the name in full.

Spellings: About 100 words common in fisheries journals are listed in Appendix F.

Appendices: Appendices A to F are available on request from the Office of the Editor.

Guide pour les secrétaires d'auteur

Lisez le "Guide des Auteurs" reproduit dans l'édition courante du *Journal*. Si vous avez des doutes sur la façon de dactylographier le texte ou d'en agencer les détails, suivez la pratique du *Journal*.

Dactylographiez le manuscrit sur papier blanc de bonne qualité, et non sur papier pelure, mesurant de préférence 21.5 × 28 cm (8.5 × 11 pouces), laissant toujours une marge d'au moins 2.5 cm. Si possible, employez un papier avec lignes numérotées en marge.

Tout le manuscrit, y compris tableaux, légendes de figures, renvois et références bibliographiques, devra être dactylographié à double interligne. Ne soulignez que les mots qui devront être imprimés en italique. Mettez en retrait la première ligne de chaque paragraphe du texte et de chaque renvoi.

Dans les titres et les en-têtes, n'employez la majuscule que pour le premier mot et les noms propres. Pour les petites majuscules, employez les minuscules du dactylographe.

Indiquez tous les renvois du texte par des chiffres arabes suscrits. Numérotez les renvois consécutivement par tout le texte, à commencer par ceux de la page titre. Placez chaque renvoi directement sous sa référence, le séparant du texte par des lignes horizontales.

La première page ne doit contenir que le titre de la publication, le nom et l'affiliation de ou des auteurs, les renvois appropriés et le titre courant (voir Appendice A). Dactylographiez le résumé sur une page séparée (voir Appendice B). Numérotez chaque page, à commencer par la page titre, et y compris celles qui contiennent les tableaux et la légende des figures.

Voyez à ce que l'auteur vérifie le manuscrit final, et soumettez la première copie et ainsi que deux copies lisibles au bureau du Directeur de la publication.

Tableaux. Consultez une copie du *Journal* pour la composition des tableaux (voir Appendice C).

Portez une attention particulière à ce qui suit au sujet des tableaux numérotés.

Dactylographiez chaque tableau sur feuille séparée, vous servant de papier sans lignes numérotées.

Numérotez les tableaux en chiffres arabes.

Tracez des lignes horizontales au-dessus et au-dessous des en-têtes et au-dessous des colonnes, rarement ailleurs; ne tracez jamais de lignes verticales; laissez plutôt des espaces supplémentaires.

Indiquez les renvois dans les tableaux par les minuscules suscrites et placez les renvois au bas du tableau.

Placez les tableaux à la suite des références bibliographiques.

A l'endroit où le tableau est mentionné pour la première fois, indiquez dans la marge "Tableau — près d'ici."

Remarquez que les tableaux dans le texte ne sont pas numérotés, sont dactylographiés avec le texte et ne requièrent que rarement des lignes horizontales (voir Appendice C).

Figures: Envoyez avec le manuscrit une reproduction photographique (21.5 × 28 cm ou moins) pour chaque illustration. Dactylographiez le nom de l'auteur et le numéro de la figure sur une lisière de papier que vous collerez au dos. N'écrivez pas à la main ou à la machine sur la photographie même. En plus, dactylographiez les légendes, dans l'ordre, sur feuille séparée, intitulée "Légendes des figures." Intercalez cette feuille à la suite du texte.

A l'endroit où chaque figure est mentionnée pour la première fois, écrivez en marge "Fig. — près d'ici."

Equations, formules et expressions mathématiques: Laissez trois espaces au-dessus et au-dessous des lignes renfermant des chiffres ou des lettres suscrits et souscrits, ou encore au-dessus et au-dessous d'équations et de formules. Placez chaque composante des différentes expressions dans la position qui lui est propre (voir Appendice D).

Indiquez clairement tous les symboles. Epelez en marge les lettres grecques, la première fois qu'elles apparaissent. Faites une distinction entre la lettre *l* et le chiffre *un*, et entre la majuscule *O* et le chiffre *zéro*. Insérez de la même façon toute autre note explicative.

Références: Vérifiez le texte afin de vous assurer que toutes les références apparaissant dans la liste bibliographique sont bien mentionnées dans le texte. Dactylographiez à double interligne dans le style en usage dans le *Journal* (voir Appendice E). Les noms de revues sont abrégés suivants les *Biological Abstracts*; en cas de doute, écrivez le nom au long.

Orthographe: Une liste d'environ 100 mots communément employés dans les périodiques sur les pêches est donnée en Appendice F.

Appendices: On peut se procurer une copie des Appendices A à F sur demande au bureau du Directeur de la publication.

ABBREVIATIONS USED IN THE INDEX

ABRÉVIATIONS EN USAGE DANS L'INDEX

- J-** Journal of the Fisheries Research Board of Canada
Journal de l'office des recherches sur les pecheries du Canada
- B-** Bulletin
- AR-** Annual Report of the Fisheries Research Board of Canada
Rapport annuel de l'Office des recherches sur les pecheries du Canada
- CHN-** Circular of Halifax Laboratory
Circulaire du laboratoire à Halifax
- CNG-** Circular of Biological Station, Nanaimo, B.C. (general series)
Circulaire de la station de biologie à Nanaïmo, C.-B. (séries générales)
- T-** Technical Report/Rapport technique
- MSP-** Miscellaneous Special Publication/Publication diverse spéciale
- S-** Studies/ Études
- A-** Interpretive Articles/ Articles explicatifs

Journal
of the **Fisheries**
Research
Board
of **Canada**

Journal
de l'**Office**
des **recherches**
sur les **pêcheries**
du **Canada**

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Cat. No. Fs93-7/32-13

